

# MICHIGAN FARMER

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### Agricultural.

#### WEIGHT OF FLEECE.

At present there is a crusade being preached against heavy fleeces, and the wool-growers of this and other States are hunting for long stapled plain rams to breed the wethers and grease out of their flocks. They will find this a very easy task, but whether results will be such as they anticipate is another question. One thing is certain, they can breed smooth, long-stapled light fleeces into their flock more readily than they can get back the heavy fleeces which have made the American Merino the greatest wool-bearing animal in the world, and caused a demand for stock sheep from the wool-growers of Australia and South America. Let our Michigan sheep-breeders and wool-growers read the following paragraph from the report of Consul Griffin, located at Sydney, Australia, on this point, before adopting a policy which may throw them back ten years in the improvement of their flocks:

"Mr. Henry Austin, in his wool circular for July 1, 1888, is very decided in the opinion that Australian farmers should pay more attention to the weight of the fleece than its quality. He says: 'It cannot be too often impressed upon wool-growers that weight is the one thing necessary, and that all other considerations should be sacrificed to its attainment.' He argues that at present prices no one can live on the old scale of weights, and that if the farmer wishes to make both ends meet he must produce heavy fleeces."

Australian wool has long been held up to our wool-growers as the model for them to follow. But it is very evident these fine light fleeces are not paying ones to grow. That was just the experience of the wool-growers of this country when they adopted the policy of crossing their flocks with Saxony and Silesian rams. Manufacturers would not pay enough difference between them and heavy fleeces to enable growers to live at the business, and they turned their attention to improving the weights of their fleeces. Now they are thinking of trying the same experiment of growing light fleeces again, and we believe the experiment will be as costly and as futile as it proved over thirty years ago. Light, fine fleeces will never pay the grower until there is a radical change in the system of buying wool. Good sound stapled American fleeces are fine enough and good enough to clothe the people of this country, or any other, for that matter, and those who find fault with them either do not know their intrinsic merit or do so for the purpose of injuring their value for their personal advantage.

#### Crops in Dakota.

The Territorial Statistician of Dakota reports the average yield per acre of the principal crops as follows: Wheat, 9½ bushels; rye, 18; oats, 28; barley, 30½. Average condition per acre: Buckwheat, 77; potatoes, 80; sorghum, 67; sugar-cane, 78. Northern Dakota, the Statistician says, suffered severely by the frost of August 16, and what grain they have is a small, shrunken berry, and not fit for milling purposes. They will be obliged to come south of the first line to secure their seed. Central Dakota has produced a fair crop, and of good milling quality. Two or three of the newer settled counties report good crops. South Dakota was badly injured by the hot weather in July, which hastened harvest fully ten days. He adds: "Owing to the ruling high prices farmers are disposed to sell their grain as quickly as they can, and in many instances will sell themselves short of seed."

Owing to heavy frosts the crop of broom corn in some sections of Illinois has been severely injured.

### THE CENTRAL MICHIGAN FAIR.

The Central Michigan Fair, which opened at Lansing on Monday of last week and closed Friday night, experienced most unfavorable weather—not a single clear, bright day occurring while it was open. It was hard work keeping warm, and added to this were cold, drizzling rains, spilling the track, disgusting visitors and exhibitors, and probably leaving the society in debt, although this is yet an unsettled question. Any other society in the State would have been knocked out of time had the experience of the Central Michigan for the last three years been theirs; but the managers of the Central have both brains and grit, and each year they add improvements to their grounds and buildings, buy more land, and lower their indebtedness. With one good year they would probably clear up everything, but another year will have to elapse before they can do this now.

In many respects the Fair this year was an improvement over previous ones. Some classes of live stock were not so largely represented—this being the case with cattle and Merino sheep. But other classes—namely horses, were well filled and with a very fine quality of stock. The halls were well filled. Fruit and vegetables were very good, especially the latter. The exhibit of butter was the largest and best we have yet seen at a fair in Michigan. It was under the charge of W. J. G. Dean, of Hanover, Jackson Co., the well known breeder of Jersey cattle, and he was very proud of the showing. There were over 60 entries of butter, and not a poor or even fair entry in the lot. They were all good—and a number would grade very choice.

In the various classes of horses there was a goodly number of entries, and generally of fine animals. In the draft classes Percherons took the lead in numbers, the largest exhibitors noted being H. Byam and Geo. H. Hall, with a number of very fine grade colts from Percheron sires. Among the latter were two suckers shown by Mr. Byam, a black and a bay, which could hardly be improved. In Clydesdales Mr. J. M. Turner had a grand lot of all ages, headed by the famous Young Wellington, now getting well advanced in years. Two young stallions were particularly fine ones. In the class of farm, or general purpose horses, there was a collection of horses, bred from draft, trotting and all classes of stallions, many of them very useful looking animals, and showing as a rule sound legs, good feet and compact make-up. When we come to the trotting classes there was a number of all ages of excellent breeding and certainly good representatives of the American trotter. There were representatives of Pilot Medium, Greenbacks, Montgomery, Bay Middleton, Hamlet, and other noted stallions. In the races were entered a number of young horses from these sires which are very promising. The muddy track and cold weather prevented good time being made, although Loretta F., Frank Middleton, Jubilee, Netcracker, Helping Hand, Lady M. and Gerdae were entered in the trotting classes, and Ira Wilkes, Woodmont, Polka Dot, Nelly S., Minnie A. and others in the pacing class.

Lady Ballion, the wonderful young mare by Pilot Medium, was exhibited in front of the grand stand. She is a bright bay with black points, trim as a greyhound, and looked as if she could beat her record, 2:31½, whenever called upon. There was a number of young colts shown which we expect to hear from in a year or two. Among this class was a bay colt shown by Lyman K. Beach, of Howell, which is Michigan bred both sides. He is called R. K. B. B. sire Greenback 2480, dam by Pasacas 5500. He has the action of a trained trotter, a square open gut that impressed every one as phenomenal in a colt so young, and only half broke. Mr. Beach had a roan filly, two years old, a full sister to the dam of his colt, which is very blue-blood in appearance, and likely to be heard from hereafter. R. K. B. resembles his sire very much in form, especially in the back and quarters, and his breeding on both sides must make him a natural trotter and a fast one. There was a very fine looking French coacher shown, imported by Savage & Farnum, of Detroit, but the owner was not around and we did not learn anything about him or where he is kept.

In cattle, Shorthorns were shown by J. M. Turner, of Lansing, and B. B. B. of Oshtemo, Livingston Co.; Herefords by J. M. Turner and Wm. Newton, of Lansing; Holstein-Friesians by W. K. Sexton, of Howell, and C. L. Seelye, of Lansing; Galloways by R. B. Carver, of St. Johns; Devons by H. L. Carver, of Brookfield, and Jerseys by the Smith Brothers, of Eagle, Clinton Co. In fat cattle the Agricultural College experiment steers were on exhibition, and probably attracted more attention than any other stock on the ground. Those interested in the different breeds wanted to see how their favorites fared in the struggle, and it is a singular fact that all appeared satisfied with the results so far attained. Perhaps the Holstein and Jersey men are feeling better than any one else. We also noted two fine grade Shorthorn steers, shown by a farmer near Lansing, whose names we did not get. They were light rams, well grown blocky fellows, and are just old enough to make good Christmas carcasses—juicy and tender. Sheep covered a good deal of ground, but

the Shropshires took most of it. C. S. Bingham, of Vernon, J. M. Turner, of Lansing, W. J. Garlock, of Howell, R. K. Smith, of same place, and S. A. Robinson, of Lansing, all had large exhibits, including both imported and home bred. In Merinos J. W. Hibbard, of Bennington, A. Parmenter, of Vernon, and Mr. Stowe, of Iosco, Livingston Co., were the principal exhibitors. The Merino men are feeling better than they were three months ago, but there is yet room for improvement. There was also a good show of hogs. H. W. Riley, of Greenville, Montclair Co., had Victorias and Poland Chinas; L. W. & O. Barnes, of Byron, Poland Chinas; A. Parmenter, of Bennington, Poland Chinas; J. W. Hibbard, of Bennington, Shilawasse Co., and Darwin Foster, of Grand Lodge, looked after the interests of the Berkshires, and it was done well.

The exhibit of poultry has always been a feature of the Central Fair, the fine coops provided for exhibitors allowing visitors a good look at them. The cold, wet weather, however, kept some exhibitors away this season, and it was not as large as usual. It would have been a good showing at any other fair.

### THE KALAMAZOO COUNTY FAIR.

The opportunities which this society has for holding a successful fair are not paralleled by any county in the State. The grounds of the National Park Association are already fitted up to accommodate every department of an extensive exhibition. The whole of a southwestern Michigan could here unite in a district fair with ample facilities at hand and very favorable access by railroads from all quarters.

The show at present is quite extensive in all departments except in cattle, sheep and swine. Breeders who in favorable seasons make large exhibits in these three departments come with the excuse that their stock is too thin in flesh to show, and they dare not compete with localities which they supposed were more forward. But when they come to compare notes and look at the stock on exhibition, there is a general feeling of regret that they did not bring along the animals. In horses every stall was filled, from the wiry roadster to the stately, staid and strong Percheron. The horse which seems now to take best with the general public is the Cleveland Bay. The Horse Company of Paw Paw made a fine show in this class, although recent sales have reduced their stock of show animals. Their importations this year were yearlings and two-year-olds that are coming into form to make fine animals. S. B. Hammond, of Kalamazoo, showed a fine work team of black mares, seven years old. They had done the work of the farm for the season but were in good condition.

There were many roaster horses and colts, some of them dressed in boots and garters and flannel stockings, whose paces were being educated to the tune of 2:30—so their owners were led to believe, but whose performance lacked several points of such achievement. The fine wool sheep men were not very aggressive in showing off their animals. The specimens on exhibition showed short pastures and reflected the sentiment of cheap wool and lack of interest.

W. L. Black, of Galesburg, had several pens of Shropshires—all sold or bargained away at good prices. Mr. Blake has bought 1,300 sheep for feeding the coming winter, and likes the cross bred lamb for such a purpose.

Orrin Snow & Son showed some fine Shorthorn stock, but the ribs of their cows did not show us hieroglyphics to tell of short feed on their farm. It is reported that they have been starving some of them to get them into breeding condition with good prospects of success. From calves up the animals were all in splendid form and flesh, and if one wishes to see fine forms dressed up for the fair, a look into these stalls will satisfy the average spectator.

There were Jerseys, and Herefords, and Holsteins, but on some of these the points were more conspicuous than the qualities they are said to possess. The Hereford seems to be an attempt to imitate the virtues of the Shorthorn, with a fair degree of success, but still seems to be second in the race for popular favor.

Hogan, the balloonist, made a futile attempt to reach enough air inside his balloon to get him above his fellows. He only succeeded in confirming the sceptical in their opinion that it was all a sell. The failure probably came through lack of fuel to heat the air faster than the cold currents from outside could diminish its expansion.

Floral Hall was filled by local exhibitors, and those who had opportunity to compare them say that it excelled the like exhibit at the State Fair. The entries were larger in the aggregate than last year, and with continued fair weather the society expects to be able to meet all its obligations and leave a balance against what all fair associations most dread—a rainy day.

Potatoes are being received in such large quantities in the New York market that prices are declining. By the car-load they are selling at \$1.37 at 1.50 per 100 lbs., or 45¢ per bushel.

A CORRESPONDENT residing in Cass County writes us that the fruit crop is a failure in that section.

### For the Michigan Farmer.

#### IONIA FAIR.

The thirty-second annual fair held by the Ionia District Agricultural Society opened under rather unfavorable circumstances. The drizzling rain that continued from Tuesday through all Wednesday interfered materially with the arrival of exhibitors and greatly retarded the operations of the managers. On Thursday morning there were indications of pleasant weather, and the in-coming trains brought throngs of visitors, and before noon the grounds were literally thronged with carriages and pedestrians.

The display in Art Hall was not what we expected, and not fully up to what it should be near as large a town as Ionia. The show of fruit in Horticultural Hall, although not large, was exceptionally good in quality. The same may be said of the vegetables; in fact, we have not seen a better show of potatoes, beets and cabbage in several years.

The show of stock was large and of good quality for a district fair. The show of heavy horses, especially in the grade and general purposes classes, was of superior quality.

Among the exhibitors of pure bred Percherons were found J. L. Wickes & Co., of Colby; N. B. Hayes, of Mair, Adgate & David, of Ionia, and Wm. Steele, of Ionia. Of the exhibitors of Clydesdales, Babcock Brothers, of Ionia, and Wm. Steele, of Ionia.

Wm. Steele was out with his excellent herds of high bred Shorthorns, and showed in competition with N. B. Hayes, of Mair; C. M. Durkee, Thomas Taylor, Jerry Spaulding, and Amos Welch. H. H. Hinds, of Stanton, showed some very fine fat Shorthorn steers that attracted considerable attention.

The Jersey cattle were out in considerable numbers, and were shown by Crosby Bros., of Greenville; Wm. Steele, of Ionia; Jacob Gibbard, of W. Benedict, and F. Cutler. Holstein-Friesians were shown by C. F. Gilman, James Bamborough, F. Eddy and J. Whitbeck.

Galloways were shown by J. L. Wickes & Co., of Colby, and E. J. Eagle, of Ionia. Red Polled cattle were shown by J. F. & E. W. English, of Saranac.

Wm. Steele exhibited his Herefords. Among the exhibitors of Merino sheep we found A. W. Bissell, Fawcett, Charles Beahan, Palo, and C. C. Freeman, Ionia.

Searing & Unstead exhibited Oxford-downs.

A very fine showing of Shropshires was made by J. Corbett, of Ionia, and Crosby Brothers, of Greenville. G. S. Allen & Son, of Danby, exhibited Lincoln sheep. At the head of the flock is a ram that weighs 350 pounds. Among the swine exhibitors were George I. Strachan, Palo; Buck Brothers, Portland; J. S. & W. G. Crosby, showing Poland Chinas; C. A. Searing, Chester Whites; L. L. Pike, V. G. Conner, Suffolk; and George S. Marcy, Portland, Berkshires. Among Mr. Marcy's Berkshires was a fine bar sired by Sally's Duke, and a sow bred by Snell's Sons, of Canada.

### For the Michigan Farmer.

#### SHEEP AND WOOL 45 YEARS AGO IN MICHIGAN—50 CENTS A POUND FOR WOOL!!

The result of the Presidential election of 1840, as is well remembered, culminated in victory for a Whig President, and also a Congress of the same persuasion. That Congress believed in protection to American products, fostering home manufacturers and home products, and enacting such laws as to them seemed needful to carry out what Henry Clay and his friends termed the "American system."

A protective tariff on wool and woolen manufactures greatly stimulated the production of wool and caused the erection of many woolen mills in the country.

The first in this State, as the writer believes, was at Ann Arbor, by a Mr. Beckwith, a very worthy man.

For eight or ten years previous to this period the writer had been putting in hard work in the way of farming in Wayne County with only moderate success. He now thought he could see money ahead in sheep and wool, and determined to go for it. He therefore gathered his own small means and borrowed a little more, went to Ohio and returned with a flock of 180 head of what would now be considered a very scaly lot of low grade sheep, as the finer wools had not then been widely introduced.

When the first shearing came off, the Ann Arbor fair had been some time in operation and advertised highest price paid for wool. Of course my clip was soon sacked and on its way to market. The manufacturer was a little surprised when told it was all from one flock (about 800 pounds) saying he believed it the largest in the State, and seemed pleased. The owner was quite as well pleased when 50 cents a pound in clean straight new bank notes were counted out to him.

That price was largely the result of a protective tariff. It gave an impetus to growing and manufacturing, not only wool and woolen goods but to trade and business generally.

The writer might pursue this theme and give results of adverse legislation whereby a much superior quality of wool would not bring the producer over half the price above named; but his present purpose is to show

up a phase of the olden time without occupying too much of your columns. With your indulgence will relate what occurred to his second wool clip and how "the best laid plans of men and mice gang aft a-glee." As the previous year it was sacked and sent on its way to the Ann Arbor factory, and having full confidence in its management the owner did not follow but gave directions as to remittance of purchase money, expecting last year's price at least. A clap of thunder from a clear sky! A few days later the mail brought a letter which read about as follows:

DEAR SIR—Your letter and wool received. We regret being obliged to inform you that the wool is in such condition we would not use it as a gift. Like the lot we purchased of you last year, in addition to large quantities of the ordinary burdock there is a burr a great deal worse—so hard and so adhesive as to ruin ordinary machinery in working it. We therefore hold it subject to your order.

It is only necessary to say that this deponee never again went "wool gathering." Before another year rolled round he, sheep and farm, had parted company.

H. RAYMOND.

DETROIT, OCT. 1, 1888.

### WOOL AND THE WOOL TRADE IN AUSTRALIA.

Report of U. S. Consul Griffin, of Sydney, in Relation to the Growth of the Trade, Condition of the Clip, etc.—Some Interesting Figures.

The returns of the export of wool from all the colonies for the season of 1887-88 have been made up to the 30th of June, 1888, and, as predicted in my report of the 20th of March last, the quantity is in excess of that of the previous season by nearly 100,000 bales. The total quantity of wool exported from Australasia from the 1st of July, 1887, to the 30th of June, 1888, was 1,283,330 bales, against 1,185,282 for the corresponding period of 1886-87; thus showing an increase of 98,048 bales. The decrease in New Zealand was occasioned by the inclement weather during the lambing season, and the excessive rains at shearing time. The rains in many districts affected both the weight and the quality of the fleece. The following table shows the total quantity of wool exported from each of the colonies for years ended June 30, 1887-88:

Colonies.	1888.	1887.	Inc. Dec.
Victoria.....	317,561	331,978	15,800
New South Wales.....	297,271	324,961	64,130
South Australia.....	150,027	141,130	1,907
Queensland.....	88,861	65,305	23,556
West Australia.....	16,431	16,373	58
Tasmania.....	16,657	16,413	244
New Zealand.....	206,215	271,934	5,699
Total.....	1,283,360	1,185,282	108,728

The above table shows the net increase to be 98,068. The great bulk of the exports went direct to London. Of the exports for 1888, London received 1,173,345 bales and the Continental countries 42,990 bales; direct and 45,336 bales via London; total Continental countries, 88,336 bales. The United States received 18,347 bales direct and 3,923 bales via London; total United States, 22,270 bales. A large portion of New South Wales wool is shipped to Europe and America by way of other colonial ports. For instance, there are annually exported from Melbourne between 40,000,000 and 50,000,000 pounds of wool, and a little more than a third of that amount is sent by way of Adelaide.

The total shipment of wool from Sydney during the year ended December 31, 1887, was 128,151,154 pounds, of which 125,167,431 pounds were shipped in the grease and 2,983,720 consisted of washed wool.

On the 31st of March, of the present year, the estimated number of sheep in the whole of the Australasian Colonies was 96,482,038. Of these nearly one-half were in New South Wales, the figures for that colony being 46,965,153, an increase of 7,795,848 since 1887 and of 15,304,831 since 1885. New Zealand takes rank next to New South Wales in the production of sheep, the number being 15,335,101. Queensland comes next, with 13,926,158, while Victoria has only 10,633,985. The number of sheep in each of the colonies at the end of March, 1888, was as follows: New South Wales, 46,965,153; New Zealand, 15,335,101; Queensland, 13,926,158; Victoria, 10,633,985; South Australia, 7,254,000; West Australia, 1,909,944; Tasmania, 1,517,243; total, 96,482,038.

Of the 44,935,153 sheep in New South Wales, 34,474,181 are classed as combing Merino. These included pure and stud superfine Merino and ordinary, etc., 15,535,529 are classed as clothing, the total number of Merino being 49,009,710. Of the long woolled sheep, such as the Lincoln, L. Leicester and Romney Marsh, there were 384,519, and cross-breds, 790,933; total amount of sheep, 46,965,153.

During 1887, 614,118 sheep were introduced into New South Wales from the Australasian Colonies, principally overland, and 3,934 by sea. The quarantine regulations which were in force in 1887 prevented importation from England and the United States and other countries. It is estimated that out of the total number of sheep in Australia only about 3,000,000 are shepherded, and that the remainder, 93,482,038, are kept in paddocks. In New South Wales the estimated number paddocked is 41,723,073; shepherded, 1,358,153; both ways, 1,001,311; total, 46,965,863. In forty-five districts the sheep are said to be improving, which condition the chief inspector of stock attributes to the good season, increased attention to breeding and paddocking, and the introduction

tion of high-class rams and ewes and the exercise of judgment and care in classing and culling the flocks. The general average of the lambing for New South Wales is returned by the Inspector of Stock at 76½ per cent and the shepherded sheep at 68½ per cent, a very slight difference. The total clip in New South Wales, according to the number of sheep, would be 31,082,300 sheep shorn in the grease, average clip, 5 pounds 9 ounces per sheep, hot water and spout washed, average clip, 3 pounds 13 ounces 1½ ounces per sheep, equal 1,997,830 pounds; 554,687 sheep, scoured, average clip, 2 pounds 14 ounces, equal 1,594,725 pounds. Lambs—8,185,453 lambs shorn in the grease, average clip, one pound 12½ ounces per lamb, equal 14,530,347 pounds; 123,745 lambs, washed, average clip per lamb, 7 pounds, 5 ounces, equal 103,415 pounds; total clip, 191,567,560 pounds.

#### CONDITION OF THE CLIP.

In nearly every part of Australia the condition of the clip showed an improvement over that of the previous season. The clip in the Riverina district was more than up to its usual high standard. These wools were broad, well-grown and heavy in grease. The manager of the New Zealand Loan and Mercantile Agency Company (Limited) at Melbourne states that the Riverina wools showed a decrease in the amount of sand and dust. From the Lower Lachlan the wools were well grown and in good condition. The Upper Lachlan were very heavy in the grease, and in many instances were wanting in lustre and fineness. The eastern Riverina wools were of exceptionally fine quality, light in weight and long in staple and of brilliant lustre. The Darling district produced wools that were well grown but seedy. Wools from the western district of Victoria were very light and fine. The northeastern and northwestern districts of Victoria produced excellent wool, very well grown and light in condition. The South Australian wools were lighter and less tickly than usual.

A feature in the Sydney market this year is the introduction of a greater quantity of wool from Queensland than formerly. Growers in Queensland are beginning to see the importance of obtaining quick returns from the sale of their wool in Sydney. The product this season is remarkable for its fineness and soundness of staple. Mr. Henry Austin, in his wool circular for July 1, 1888, is very decided in the opinion that Australian farmers should pay more attention to the weight of the fleece than to the quality. He says: "It cannot be too often impressed upon wool growers that weight is the one thing necessary, and that all other considerations should be sacrificed to its attainment." He argues that at present prices no one can live on the present scale of weights, and that if the farmer wishes to make ends meet he must produce heavier fleeces.

#### COLONIAL SALES.

Between 30 and 40 per cent of the wool product is sold direct in the Colonial market. During the year ended June 30, 1888, the total sale was 574,008 bales. The number of bales offered was 475,653, and it is said if the offerings had been larger the sales would have increased in a corresponding degree, inasmuch as a number of buyers left before completing their purchases. The London wool merchants are doing everything in their power to check the Colonial sales. They argue that it pays the buyer better in the long run to get his supplies in London rather than in Australia, for the reason that the changes in the market are apt to influence private dealers to sell under current rates. This method of reasoning finds little favor, and it is said that it is too much to expect the people to turn over to the merchants created by their own enterprise for foreign buyers. Moreover, vast sums of money have been expended in the erection of magnificent warehouses with commodious auction rooms in all the central cities of Australia. The New Zealand Loan and Mercantile Agency Company (Limited) have for many years recognized the importance of bringing the Colonial wool markets as near as possible to the point of production. Besides their immense warehouses in Sydney and Melbourne, they have recently purchased five acres of land at Kensington Hill, near Melbourne, at the junction of the Northeastern and Western lines of railways, for the purpose of erecting buildings, which, it is said, will surpass anything of the kind in the world. The advantage to growers will be very great, for, with the improvements it is proposed to adopt, the company will be enabled to handle their produce with less cost and greater facility than formerly. The buyers will also be benefited by the methods they propose to adopt for sampling and shipping the wool. The course adopted by the company in enlarging their business is an evidence of their faith in the rapid expansion and growing requirements of the Australian wool trade.

The New Zealand Loan and Mercantile Agency Company (Limited), with one exception, handles a greater quantity than any other firm in the Colonies, R. Goldborough & Co. having the first rank, Mort & Co. the third and the Australian Mortgage and Agency Company (Limited). Harrison, Jones & Devlin, Dalgety & Co., Dennis L. Austin and others following.

#### SAMPLES OF WOOL.

I am forwarding by the outgoing San

Francisco mail steamer "Mariposa" a collection of twenty-four samples of Australian wools to the Department of State, Washington, D. C. These samples were prepared especially for me by the New Zealand Loan and Mercantile Agency Company (Limited). Each sample is arranged so as to be seen without opening the doors, and contains a description of the kind of wool, the name of the district where grown, weight of fleece and the price of same per pound in the Sydney markets. The case is divided into four different apartments, representing the Colonies of New South Wales, Victoria, South Australia and New Zealand. The two former colonies are represented by eight samples each and the two latter by four samples each. A descriptive list of the samples, with the names, brands, descriptions and prices per pound in Sydney has been prepared by Mr. James Wilson, Secretary of the Commercial, Pastoral and Agricultural Association of New South Wales.

#### Breed vs. Feed.

Major H. E. Alvord in the *American Cultivator*, thus defines his exact position on the above question: It is a curious fact that in quoting a man in print, and especially upon some disputed agricultural subject, he is often made to say a thing was black, when he has tried his best to express his opinion that it was white. This thing would be very exasperating if it were not so common.

In several places lately I have seen Dr. Surivet and others, as well as myself, quoted as stating broadly that it did not make any difference what was fed to a cow, as the milk could not be changed by the food. I hope few people have been led to believe that the persons named ever made such absurd statements.

What I have said and written upon this point has been merely a repetition of the general truth, which is abundantly sustained by experimental evidence, that the breeding has more effect than the feeding upon the quality of milk, if not the quantity, which is produced by any given cow. If a cow, as a result of a long line of breeding in a particular direction, has fixed upon her and her dairy products the characteristics of her breed and family, these will never be materially changed by the way she is fed, or even neglected, so long as she remains healthy. If bred a butter cow and inheriting this trait, she will always be a butter cow. If by nature her milk is poor in butter fats, it will always be so, relatively, no matter how she is fed. If by inheritance a large milker, a generous yield will be her habit, even upon scanty rations; and if naturally a small milker, no quantity of feed will profitably increase her product. Now these statements, which are certainly well substantiated, are perfectly in accord with the well-known increase or decrease in milk or butter, or both, from a given cow as the direct result of a change in her feeding or other treatment.

Dr. H. P. Armsby, whom I regard as an excellent authority on this subject, has recently expressed his views admirably in these words: "The quality of milk which a cow can produce depends upon her breed and individuality, and in this sense, the quality of the milk is more dependent upon breed than upon feed. On the other hand the quality of milk which any given cow will produce is very largely dependent upon her feed." Other good authorities may also be quoted, I believe correctly, as follows: "The quality of milk is most dependent upon breed." "The disposition by breed will predominate." "The quality of the milk is mainly dependent upon the breed of the cow but not exclusively." "If by quality is meant richness of milk, it certainly depends, primarily, upon the breed." "The good cow will give good milk on quia poor feed; the poor cow will give better milk on good feed than on poor, but always a small mass of comparatively inferior quality."

It may be regarded as a settled fact that every cow has her limit of capacity, both as to quantity and quality, or richness of milk. Beyond this limit she cannot go, and no feeding or treatment can force her beyond it. It does not require much observation to determine what this limit is and ascertain beyond what point food is wasted if consumed. In the well-bred animal the limit of possible production is much farther removed from average product than in the common cow; hence, as a rule, highly bred cows can be fed highly with profit. While we speak of a cow being unable to do better than her best, it is true that our cows are seldom at their best—rarely maintained at their utmost limit of production, and so it is generally easy, by some change or improvement in feeding or care, to get direct results and prove that food does not affect product. The general statement remains true, however, that in the dairy cow breed is more potent than feed, in determining the product and the profits of the animal.

PARAGRAPHS and labored articles on "Mutton" always begin "We Americans know very little about mutton." This is a rank untruth. This State supplies about a million mutton carcasses yearly, and a number of other States about as many. They are all eaten by the people living in this country. There is more mutton per head eaten in the United States than in any other country. The poorest families here eat mutton. Only the wealthy eat it in Great Britain. In view of this fact let the ancient chestnut at the head of this paragraph be given a rest. If we know little about mutton it is not for want of experience.



## The Horse.

### Bad Points of Horses.

Rules are given for the guidance of those who select horses for use of the cavalry in Great Britain, and quite a number of these are applicable in choosing a horse for any kind of work. They are as follows:

1. Size—Four-year olds, i. e., three or four after October 1, should not be less than 15 hands  $\frac{1}{2}$  inch nor exceed 15.1  $\frac{1}{2}$  for light cavalry.

For medium they should not be less than 15.1 nor over 15.2.

For heavy cavalry not less than 14.2 nor over 15.3  $\frac{1}{2}$ .

N. B.—In measuring a horse or judging of his height and size by sight take care he stands on a level with yourself. Dealers generally stand a horse, if undersize, on higher ground, or if oversize, on lower ground than the intending purchaser.

2. Want of a fair amount of breeding should be an absolute bar.

3. Reject a horse with a big coarse head.

4. Reject a horse with a small sunken eye. They are generally obstinate and sulky.

5. Reject a horse of a color light of the sort.

6. Reject a horse with a long slack back. It will not carry weight.

7. Reject a horse with a hollow back. The formation is weak.

8. Reject a horse with fat sides. They will not do work nor look well.

9. Reject a horse with a slack loin, i. e., and length between the ribs and the hind quarters (sacrum). They are often bad feeders and will run up light with work.

10. Reject a horse with scraggy hips. They never do credit to feeding, particularly if also slack in the loins.

11. Reject a horse with a bad kirth, i. e., "light through the heart." This formation will always cause trouble in saddling.

12. Reject a horse with a thick or short neck.

13. Reject a horse unless it has a good rein. With a clumsy neck the head is in consequence badly set on. Without a good rein a horse will never break well.

14. Reject a horse with very low withers. The saddle will be apt to work forwards, and the "rein" will probably be deficient, and the leverage for muscles of the forehead is defective.

15. Reject a horse if very short. There is not room enough for the kit.

N. B. To see the above points (1 to 16) stand on the side and form your opinion before the horse moves off.

17. Reject a horse with a narrow or shallow chest. There is not sufficient capacity for the lungs.

18. Reject a horse whose forelegs very close together. This and the former defect generally go together. To see these points stand in front.

19. Reject a horse whose forelegs are not straight. They will not stand wear. Stand behind the horse as he walks away from you, and you will be able to notice these defects, if they exist.

20. Reject a horse which is light below the knee. The conformation is essentially weak.

21. Reject a horse with long, or with short, or with upright pasterns. Long pasterns are subject to sprains. Short or upright pasterns make a horse unpleasant to ride, and, on account of extra concussion, are apt to cause ossific deposits.

22. Reject a horse with toes turned in or out. The twist generally occurs at the fetlock. Toes turned "out" are more objectionable than toes turned "in." When toes are turned out the fetlocks are generally turned in, and animals so formed are very apt to cut or brush. Both, however, are weak formations.

23. Reject a horse whose hind legs are too far behind. Good propelling power will be wanting, and disease as a result may be expected in the hocks.

24. Reject a horse which goes either wide or very close behind.

25. Reject a horse with very straight or very bent hocks. The former cause undue concussion, the latter are apt to give away.

26. Reject a horse which is much "split up," i. e., shows much daylight between his thighs. Propelling power comes from behind, and must be deficient in horses without due muscular development between the thighs.

27. Reject a horse with flat feet or over-large feet, also with very small feet. Medium size are the best.

28. Reject a horse with one foot smaller than another.

Action must be light, easy, free and straight. Reject a horse that crosses his legs in walking or trotting. He will be unsafe. Freedom, power to move easily along, is the great point in a young horse. Keen action is not essential; it will come with the bit and breaking.

A good walk is absolutely essential. Reject a horse that does not walk well; he is never pleasant to ride. If a horse walks well he will probably trot well; but a horse may trot well without walking well.

To ascertain whether the action is true and straight, stand behind the horse as he walks and trots away from you. You cannot ascertain this important point by standing on the side.

Never omit to stand behind a horse as he walks away.

A good sloping shoulder is an important item in a riding horse, but bad action may co-exist with a good; and vice versa with a somewhat straight shoulder.

Reject a horse which is straight in the shoulder; and long from the point of the shoulder. This formation places the forelegs too much under the horse, and makes him unsafe to ride.

You may have a plain horse even if all the above very apparent defects are absent, but you will at least have a serviceable one.

A horse should be rejected for any one really bad fault. The greatest strength of a horse is limited by his worst point. Horses are often bought because they possess one or more very good points. This is a wrong principle in buying. The selection of horses should begin by rejection for bad points. Bad points are of course in a great measure a question of degree. Discretion is needed in rejecting as well as buying.

Having first of all kept clear of all absolute defects, such as the above, then select your horses for the presence of good serviceable and handsome points, and easy, free, graceful carriage.

## Horse Gossip.

PUSH, the Michigan bred mare, sired by Masterode, has reduced her record to 2:21  $\frac{1}{2}$ .

PILOT MEDIC, Tremont, Greenbacks and Mastrolde are the Michigan sires which have added to their reputation this year.

ISAAC BEAUMER, of Saginaw, has sold his fast pacing team Rip Van Winkle and Stride-away, to George H. Edbrook, of Chicago, for \$2,000.

That brilliant but unreliable trotter Guy beat Rosaline Wilkes in a special race at Philadelphia last week, in straight heats. Time, 2:10  $\frac{1}{2}$ ; 2:18  $\frac{1}{2}$ ; and 2:18  $\frac{1}{2}$ .

CHARLEY HILTON is said to have won the free-for-all trot at Spokane Falls, Wyoming Territory, September 25th; best time, 2:20. Five heats were trotted, Hilton taking the second, third and fifth.

In a trotting race for two-year-olds at Newton, Kansas, on September 12th, the bay stallion colt Campbell's Excelsior, by Electioneer, dam by Clark Chief, won in straight heats, half mile time, 1:23  $\frac{1}{2}$ ; 1:21  $\frac{1}{2}$ .

COL. SHUMAKER, a green horse, won the three-minute race at the Ypsilanti fair. Eight started, and six heats were trotted. Colonel Shumaker won the third, fourth and sixth, the last one in 2:42. He was sired by Hamlet.

DAN HIBBARD, of Jackson, this State, has purchased the three-year-old stallion Perry Wilkes, from J. E. Ballou, of Huntington, Ind. His sire was Wayne Wilkes, and his dam by Fisk's Mambrino Chief, second dam by Magna Charta.

A SINGULAR STATE OF FACTS was brought to light at a meeting at Attleboro, Mass., recently. The three minute race was won by Kate R. The brown gelding How There stood for four minutes, but was protested and turned out to be an old trotter named Frank. Guy George came next, and he was protested also. He was found to be Gray Dan, by Gideon. This gave Lydia Wood, who finished sixth, fourth money.

CLEVELAND S., four-year-old bay stallion by Montgomery, 2:21  $\frac{1}{2}$ , dam by Tippecanoe, owned by H. L. Sharrick, of Iowa, this State, got a record of 2:30 at Grand Rapids on Sept. 20, in his first public race, trotting three heats in 2:33  $\frac{1}{2}$ ; 2:31  $\frac{1}{2}$ ; 2:30. This is the first of Montgomery's get to enter the 2:30 list, and there are a large number of colts from him in the State Cleveland's performance will greatly please their owners.

THE recent stallion race at San Francisco, Cal., was won by Woodcut, by Nutwood. The other starters were Guy Wilkes and Stamboul. Guy was the favorite, with Stamboul for second choice. The first heat was won by Guy Wilkes in 2:22  $\frac{1}{2}$ , the second by Woodcut in 2:16  $\frac{1}{2}$ , the third was a dead heat between Wilkes and Woodcut, and the fourth and fifth heats won by Woodcut in 2:19  $\frac{1}{2}$ ; 2:21. The race was highly contested, and Woodcut's victory was a great surprise to the fellows who knew all about it and backed Wilkes.

It is reported the promising young pacer Bessemer, owned at Pittsburg, Pa., has been rendered useless by the act of a drunken driver. He was driven twenty miles, and then given a heavy feed while warm. The driver, whose name is Barney Coyle, has been arrested on a charge of cruelty to animals. Since the above was written, news comes from Philadelphia that Bessemer captured the 2:25 pace in the meeting held there last week, in 2:22  $\frac{1}{2}$ ; 2:23  $\frac{1}{2}$ ; 2:19  $\frac{1}{2}$ . It is likely therefore that the horse has entirely recovered from the effects of Coyle's foolishness.

THE five-year-old stallion Roy Wilkes, by Adrian Wilkes, (full brother to Mike Wilkes), dam by Pocahontas Boy, 2d dam by Blue Bull, won the 2:18 pace at Fleetwood on September 20th in the remarkable time of 2:15  $\frac{1}{2}$ ; 2:14  $\frac{1}{2}$ ; 2:15. The second heat was taken by Allen Maid in 2:16  $\frac{1}{2}$ . Ed Annan and Balsome Wilkes were among the starters. Roy was driven by his owner, A. L. Davis, and not handled as an expert would have handled him, but he won all the same, and is now believed to be as fast as any pacer living when in proper faze and well driven.

MR. P. S. TALBERT, of Lexington, Ky., has sold to Wm. Hobart, for \$15,000, the brood mare Alma Mater, foaled 1872, by Mambrino Patcher, dam Estelle by imp. Australian, her dam Fanny G. by imp. Margrave, out of Lancelotti and thence back sixteen strictly thoroughbred crosses. Alma Mater is the dam of eleven foals, among them are five that are in the 2:30 or better list; namely, Alcantara, 2:23; Alyone, 2:27; Arbitor, 2:30; Aloia, 2:29; and Alline, 2:26  $\frac{1}{2}$ . The breeders' Gazette will certainly set Mr. Hobart down as a crank or a fool to pay a big price for a brood mare bred as Alma Mater is. Her colts ought to run instead of trot if the Gazette's theories are correct.

## The Farm.

### A Seasonable Hint.

The old-fashioned way was to begin the first thing in the fall to feed the coarse fodder, and to continue feeding it as long as it lasted. This was considered the proper thing, because it got rid of the coarse stuff early in the winter, and generally before severe weather came on, and left all the best feed for the colder weather, with a little choice rowen, perhaps, for the cows after coming in milk in the spring. The real need of the cow's system was not considered—indeed, was not understood—nor was there any better knowledge about the character of the food. Their desire was to get rid of the "roughage" first, without a thought as to whether it was economy to feed so much bulky and carbonaceous food. The fact that the cow had been feeding on frosted grass and ripe, woody fiber, which contained principally carbon, a large portion of which was indigestible, was not considered a moment. The only thought was to use up the poorest first.

Many continue this practice to-day. The science of feeding is very modern, and the elements of food are of comparatively recent discovery. What little is known is slow in getting out among the farmers, but the readers of the *Rural* ought by this time to know that the two classes of food, known as nitrogenous or albuminoids and carbonaceous or carbohydrate, ought to be judiciously combined in about the proportion required for the sustenance or building up of the animal system. In the fall or early winter, dairy cows need an additional amount of nitrogenous food along with the carbonaceous croppings of the fields or the coarse fodder that may be thrown out to

them. They require some good clover hay and a grain ration, out of which to elaborate milk and keep up the muscular system. The carbon is naturally in excess in their food in the fall season of the year and early winter, until snow comes—especially if they are allowed to run in a field of uncut corn-stalks from which the ears have been snapped. They need but a moderate supply of this kind of food, which provides only heat and lays on fat. It is fat-producing, but it is not directly turned into butter-fat in the milk. It appears to go first to supply fat to the cow's system, and from this storage probably the fats are drawn to enrich the milk. But only so much is appropriated to heating purposes—in keeping up the normal temperature of the body—and stored as surplus fat as is digested and assimilated.

If there is a lack of nitrogen in the food to be combined with the carbon, the excess of the latter clogs the system and goes to waste in the manure heap; that is, nearly to waste, for the carbon in the manure is of little value. Beyond six or eight parts of carbon to one of nitrogen in food, is a waste of the carbon, when the weather is only moderately cold. In zero weather, a larger proportion of carbon may be fed and appropriated. It is therefore better to feed the more nitrogenous foods in the milder weather of the fall, and increase the amount of carbonaceous foods as the weather grows colder, and especially if the cows are exposed to the colder temperature, instead of being properly confined in warm stables, as they should be. In mild winter, when the weather is cold and sharp, animals exposed to it will eat large quantities of straw, corn-stalks, over-ripe and damaged hay, or other carbonaceous food; at the same time they must not be deprived of a due amount of nitrogenous or muscle-and-milk-producing food. There is such a thing as an excess of this, but it is seldom fed in excess, save sometimes in the form of grain, though instances have been reported of disease and even death produced by feeding food too rich in nitrogen. This is the most expensive kind of food, and this explains why cows and other cattle so frequently suffer from need of it, while at the same time they are gorged to almost splitting from over-eating carbonaceous foods in the vain attempt to satisfy the craving of the system for nitrogen. This carbonaceous food is comparatively cheap, and hence is often wantonly allowed to go to waste by feeding it in excess; whereas, did the owner understand the science of balancing foods, so as to avoid waste and still furnish the animal system with all the required elements of nutrition, he would save all his carbonaceous foods and supplement them with an appropriate amount of the albuminoids. In this way, a waste of both kinds of food would be avoided and a much larger amount of stock could be kept.

My advice to dairymen and feeders of stock generally is to feed moderately of carbonaceous food while the weather is mild; to increase the quantity when it is colder, and prolong feeding it all through the winter and spring as well as fall season. Stock will do better fed in this way, the same amount of food will go farther, and neither common sense nor the rules of true economy will be violated. The poorer the fodder, the more grain should be fed and vice versa, with due regard to the character of both the fodder and grain fed.—T. D. Curtis, in *Rural New Yorker*.

### Keeping Cabbage Through the Winter.

W. F. Brown, in the *Ohio Farmer*, says, in reply to an inquiry: Keeping cabbage in the cellar through the winter is troublesome, for we have many difficulties to guard against. If kept too warm they will grow and split, or rot; if they freeze they are sometimes injured; and it is difficult to get at them, and often the field mice destroy them in the pit. If the heads are mature and solid they should be buried roots down, but loose heads can be piled roots down so as to grow and make solid heads by spring.

To bury cabbages select dry land with a slope to carry off the water, put them on a dry day and if there is any water in the heads invert them and let them drain. Open a trench eight inches deep and wide enough for about four rows of heads packed as closely as they can be. You will leave a part of the loose leaves to protect them and no straw will be needed, but the earth may be shoveled directly on to them. Put on from 10 to 12 inches of earth and shape it up so as to keep out the rain. After the ground freezes protect the pit with straw or corn fodder, so as to prevent freezing and thawing, as this is what spoils them. Enough for use up to Christmas may be stored in boxes in a cool cellar.

Loose heads may be stored roots down and will grow and make solid heads by spring. Open a flat trench four or five feet wide and set a row across the upper end, setting them at an angle of 45 degrees with the heads packed as close as possible, then cover the roots with earth, tramp it down on them and place another row with the heads resting above the roots of the first row. When your pit is filled it will show a solid mass of heads. N. w. put up boards a foot wide or more around the edges and cover to this depth with light litter, using first corn fodder and then leaves, and put a roof over it, and although the heads may freeze a little while the roots will not and the cabbage will mature and be crisp and fresh in the spring. If you see signs of mice put some pieces of apple with a little strychnine on them around the top of the pit.

### How Weeds Travel.

It is a curious study to note the different ways in which the seeds of plants attach themselves to animals. The Spanish needle has two sharp points, the cockle burr has hold them to their place, the cockle burr has hold them to their place, the cockle burr has hold them to their place.

### Mental Traits in the Poultry Yard.

Ben. Karr, in the Popular Science Monthly, tells the following: "Of the many feelings which human beings and poultry have in common one is the sense of mortification. On a fine summer morning a group of cockerels of various ages were lounging about in the dooryard when they began a crowing which it adheres. The martins are a curious example of this class; the seed pods grow long and pointed and curved so as to form a hook, and when they dry the pod, which is several inches long, opens at the stem and the open remains hinged at the stem, and the open points are as sharp as a cat's claws and then the seeds scatter as the plant is carried along. The wind-dispersed seeds embrace a great variety, the most numerous of which are

those which like the thistle and dandelion are carried by down which adheres to the seed.

A little observation will show very many of this class. Then we have different kinds of maple and other seeds which have wings and fly. A single maple tree will seed several acres, as the seeds are so arranged that the wings give them a rotary motion just as a bird with one wing broken, which flutters along at an angle and reaches the ground a long distance from where it was shot.

There are other plants that travel before the wind on the ground scattering their seeds as they go, of which the "tumble weed" of the prairies is perhaps the best example. Some of the annual grasses have also this faculty of locomotion. All this class of plants, as they ripen, decay at the surface and become detached and then spread out so as to catch the breeze and roll along. The white clover spreads in this way; as the heads ripen half the petals turn down so that the head becomes almost a perfect sphere and when the head breaks from the stem and is rolled along by the wind until it is stopped by some impediment.

### Agricultural Items.

F. D. CURTIS, of Saratoga County, N. Y., wants dairy schools established in different parts of the State, supported by State funds, and free to students, where practical and scientific dairying in all its forms shall be taught.

SECRETARY GILBERT, of the Maine board of agriculture, says that dairy farms well managed can be made to pay a larger rate of interest than do the best factories in the manufacturing cities, and he invests his own money in dairy farms, thus putting in practice the doctrine which he preaches to others.

T. B. TERRY tested nine varieties of early potatoes this year, and the Beauty of Hebron yielded best of all. They also averaged best in size. He cautions farmers not to buy new seed potatoes until they are offered for a reasonable price, and seem to have come to a decision, just before the seed forms, a crop of both hay and seed cannot be secured from the same straw. Grown for one purpose, on proper soil, in a dry season, Hungarian grass is profitable.

A CORRESPONDENT of the *Country Gentleman* says as a weed-killer no crop surpasses Hungarian grass or millet, and that no crop except lucerne will surpass it for soiling or hay. But it must be cut for hay while the heads are green, just before the seed forms, a crop of both hay and seed cannot be secured from the same straw. Grown for one purpose, on proper soil, in a dry season, Hungarian grass is profitable.

PROF. STEWART states in the *Country Gentleman* that pea vine hay, when cut at the right time, makes an excellent milk-producing food. If the peas are not allowed to ripen, but only reach the full season, and it is well cured at this stage, it is equal to the best clover hay. If the peas ripen for use and the vines are to be fed as hay the crop should be cut while the peas are yet soft, or in a dough state, and then the peas will not be injured and the vines will be of good quality.

WHEAT fed on too concentrated food, swine lose their appetite. The hog is a grass-eating animal as much as a horse, and needs some bulky food with its grain ration. In summer, green clover and grass keep hogs healthy, and in appetite; in winter they relish roots, pumpkins, a little hay, or a mash of corn meal and cut hay over which boiling water has been poured. Keep charcoal with a little sulphur mixed with it where the swine can eat it at will.

"A minister in search of a cow" says: "And now, like a good business man, will have some visible assets. If she has much milk, she will have a place to keep it in. She should have a good, generous udder, which is shapely after milking, its four sections keeping separate individually and maintaining the 'square' formation. If it all falls together, like an old glove, she may have any amount of endorsements, but she won't have milk."

THE exhibit of cattle at the Maine State Fair at Lewiston was quite large in thoroughbred classes of Herefords and Holsteins, which are favorite breeds in Maine; but Shorthorns held their own both in numbers and quality, and quite in contradistinction to our own State Fair, the show of dairy products was quite large, both from cheese factories, creameries and private dairies. Mrs. M. L. Robbins, who manages a large dairy farm in Winthrop, and her three daughters, won all the first prizes on fine dairy butter.

A PASTURE at Rothamsted, England, has been fed to stock that were given cottonseed cake frequently, and their droppings have been spread over the land. The result is a wonderful improvement in the quantity and quality of herbage over adjoining pastures not so treated, even where nitrate of soda has been liberally used. In one case heavy dressings of nitrogenous manures alone had actually exterminated all the finer grasses—which is not strange when we remember that potash is the element most needed by the grass crop, and that when it is not supplied the finer grasses will die out.

LOG CABINS were strongholds of love, contentment, health and happiness. Con skins were nailed to the door and they were the happy homes of strong, healthy, noble men and women. The simple but effective remedies which carried them to green old age are now reproduced in Warner's Log Cabin Sarsaparilla and other Log Cabin Remedies.

## The Poultry Yard.

### Mental Traits in the Poultry Yard.

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Superior in Strength, Fastness, Beauty, and Simplicity. Wanted to color more goods than any other dyes ever used, and to give more brilliant and durable colors. Ask for the Diamond Dyes, which will be sent upon receipt of 10 cents by post, to MONTGOMERY WARD & CO., 111-114 Michigan Avenue, Chicago, Ill.

light horizontal bars, not connected with the rake, and revolved very easily. While the young dandy's wings were still drooping in triumph and he had not yet begun to crow, the reel turned under his weight and lowered him swiftly to the ground. Without a sound the cretaceous rooster walked away, too ashamed to look around.

"A disappointed barn yard fowl is often as cross as if it could show its temper after the manner of human beings. The big Dominique rooster that smashed the looking-glass was a very good-natured fellow with hens and young chickens, and he seldom resented having kernels of corn, no matter how many, snatched out from under his beak when it was done in a fair scramble. But if he had begun to crow and a kernel was dropped where he certainly would have got it had not been busy, it was too much to see his share taken away by another fowl. He frequently pecked the offender as soon as he could stop crowing and showed general ill-temper for a few moments. His indignation was so amusing that we fell into the habit of teasing him in this way until at last the old fellow began to practice choking down the rest of his crow when corn was thrown in front of him. Gradually he managed to stop more and more quickly and in the end he would swallow his voice with a gulp and snatch a bit of food as promptly as if he had not been crowing at all.

"A half-brother of this rooster learned very quickly to crow for corn, once for every kernel. He used to stand before us and crow as regularly as clock-work, always stopping for his reward and never expecting his second kernel until he had crowsed again. When almost satisfied he waited much longer between times, and at last walked contentedly away.

RICE is an excellent addition to the bill of fare for young chicks up to three months of age. It is rice—the broken grains—is bought and cooked in a nice dry mess, one pint of the rice to a quart of water. It is a cheap and good flesh-forming food for the little chicks, especially for ducks.

BUCKWHEAT is stimulating in its nature, and is therefore especially valuable for feeding laying hens and young chickens. It is largely used in France for fowls when they are being fattened, but is then mixed with fat milk, which, for the purpose named, impart the elements in which it is wanting. It gives a good color to the flesh, and is in every way one of the most suitable foods for poultry.</



## Horticultural.

## LENAWEE COUNTY HORTICULTURAL SOCIETY.

The September meeting was held at the residence of N. J. Strong, South Madison; and the discussion on new points in fruit and fruit culture was opened by Mr. Peter Collier, who thought progression was slow. He was not ready to decide which was best, to trap the curculio or spray the trees with London purple. He questioned the statement of D. B. Weir, who says the wild goose plum belongs to the Chickasaws, and of which may be fertilized by the Miner, saying they do not bloom together by a week or more. He considers a large orchard is preferable to scattered trees in plum raising. His preference is to jar the trees to get rid of the pest. Instead of setting all Bartlett for the fall crop, would set part Bartlett and part Howell.

Mr. Steer thought that a single variety of the Chickasaw plum will fertilize itself if a large number of trees are planted together. (The popular belief is that several varieties of the Chickasaw family must be planted together to produce fruit.) A single chestnut tree will generally bear a scanty crop, but with several trees near by they set well. He also recommended making thorough work of the first crop of codling moth. If there are none left to produce a second or midsummer crop they will do little damage to the fruit.

Mr. D. G. Edmiston was to have furnished a paper on grapes, but left it at home. He gave a few of his observations on the time certain varieties color, saying he saw the first traces of color on Cottage and Moore's Early, August 17; August 30 on Monroe and Marian; August 23 on Clinton, Worden and Delaware. In picking and marketing he advised neatness; cut, not pull off; cut close and cut out green and imperfect fruit.

The cause of scurf or scab on potatoes, and the best sort, brought out some opinions. Mr. Bash prefers Early Rose; Mr. Collier, Early Sunrise; Mr. Edmiston, Sunrise and Beauty of Hebron. In reference to scab, Mr. Bradish said it might be caused by a fungus growth, or by being eaten by worms. Messrs. Strong and Steer believed fertilizers have something to do with causing the disease.

The tomato root next came up. Mr. Rufus Baker thought the root worse on one soil than on another. Mr. Niles preferred a soil that is not too rich with hot or fresh manure. Mr. Gibbs thought ground not be too rich, with proper manure, for growing tomatoes.

The viewing committee made the following report:

Your committee on grounds respectfully report, that they find the young apple orchard consisting of 30 Baldwins, 20 Greenings, 15 Kings, and the balance of Russets and several other varieties, which was set about 16 years ago, in fine condition, and the fruit remarkably free from worms, owing probably to the fact that they were sprayed once with London purple preparation. The Baldwins especially are very fine. Mr. Strong has also some very fine apples of the crab varieties. He also has an old orchard, which your committee did not visit. There are about 60 pear trees in his orchard in good condition, and many of them well loaded. They consist of Bartlett, Anjou and other standard varieties. He has eight varieties of raspberry vines, looking strong and vigorous. He has a few grapes of the old standbys; Concord and Delaware. He has also a few plum trees, the fruit of which has ripened and gone. Mr. Strong has a very nice situation for his home. He has nice snug buildings with evergreen and other shade trees surrounding. Mr. Strong is a dairyman as well as a fruit-grower, and the indications are that he makes that business a success also.

The next meeting is announced at the home of J. A. Howell, near Adrian, on the second Wednesday of October.

## Grapes Along the Hudson River.

The west bank of the Hudson River, especially in certain parts of Orange and Ulster Counties, New York, is famous for its fine vineyards. The Editor of the *Orange County Farmer* has been out among them and thus describes the appearance and comparative values of a number of varieties. He says, first, the ordinary farmer who would note the best land in this section for grapes, would smile contemptuously if asked to estimate its value. It would be of no use to him. It is mostly on hill sides, many of them very steep. The soil is either slaty or filled with small cobble stones. Many of the ridges are so stony that no soil can be seen, it looks like a surface of pounded stone. What soil there is, is mainly made of pulverized stone, disintegrated and comminuted by ages of freezing and thawing and by the action of the sun and rain. Here the grapes flourish and are of the very best quality. A ton of grapes can be produced far more easily than a ton of hay and with no more labor.

Of the grapes, he says: The Agawam, one of Rogers' Hybrids, gave a good crop of fine fruit this season. It is early, of large size, red and of fine flavor. It has been hurt by mildew this season.

The Wilder, another of Rogers, has done well. This is a very large and beautiful black grape and was quite ripe on the occasion of our visit. This has not been hurt by mildew.

The Salem, also one of Rogers, was somewhat hurt by the last winter and showed it in its crop.

The Diana, a grape largely grown in the lake region, looked well here, so far as crop and foliage are concerned, but our crews do not suit it—it will not ripen as a rule. The vines were heavily loaded with compact clusters, but they were just beginning to show color; when they should have been a solid red. It cannot be profitably grown here.

The Walter was badly mildewed and the vine had been hurt by the winter.

The Ulster Prolific did not seem very vigorous, but the fruit is of excellent quality. The Dutchess, which received no winter protection, was killed back and bore no fruit. This fine grape needs a little protection, as a rule, and will richly reward the amateur for his trouble.

The Rebecca showed traces of harm done

by the winter, but the vines were well loaded with fine fruit.

The Lady, an old favorite, bore good crops, most of which had been marketed. It is a sweet, white grape, quite popular in the markets, but too foxy for our taste.

The Martha, another white grape of similar character to the Lady, was heavily loaded with fine fruit. It is almost as vigorous as the Concord.

The Peabody, one of Mr. Rickett's seedlings, is a very handsome black grape. The clusters are very large, with the berries about the size of Catawba. It is a grape for the amateur, not for market, and is of fine quality.

Golden Gem, another of Mr. Rickett's grapes, is a small white grape, rather smaller than the Delaware. It seems a little too late for this season. Were it otherwise, it would be very popular among amateurs, as it is very handsome and rich in flavor.

The Lindley, another of Rogers' Hybrids and among the more difficult of this family to grow, is, like most of this family, a rank grower, but rarely ripens its wood sufficiently to endure the winters well. It produces few perfect bunches, owing to the fact that its blossoms do not fertilize perfectly. Mr. Barnes tried an experiment with this grape this season. Instead of cutting back closely as is the custom, he left four arms of new wood, each ten to twelve feet in length, and coiled them around on the trellis. He got more than double the usual quantity of fruit as the result. When the blossoms fail to fertilize, the fruit either drops off, or produces a minute seedless grape. We noted several bunches of these tiny grapes, not larger than small currants, perfect in their exterior appearance, and tasting tolerably well, but being entirely seedless. Mr. Barnes would not advise anyone to grow this grape for market.

The Woodruff Red is a rank grower and hardy. The berry and cluster are large, red, but very poor in quality. Very foxy. It has not done very well, not keeping up to its early promise, though in other sections it has shown different results. The Undine is another one of Mr. Rickett's grapes, a seedling of Concord, fertilized by Clinton. The clusters are large, color white, good size berry and of good quality. It is a strong grower but too late for successfully growing in this latitude.

We saw the Berckmans here for the first time. It is a cross between the Clinton and Delaware, being about the color of the latter. The berry is a little larger. The vine is very vigorous and hardy and the fruit of most excellent quality, very sprightly and free from acid, even when the skin is closely masticated. Its only weak point is that it is a little late, though it is very nearly ripe at the time of our visit.

The Cleverly is a small, black grape, but hardy and prolific. It is valuable to the wine maker as furnishing a very dark colored, rich juice, which is used to give color to wines deficient in that respect.

We have always thought well of the Worden, but were fairly surprised at it in Mr. Barnes' vineyard. It resembles the Concord in foliage and growth, being its equal in these respects and it is equally hardy and productive. In addition, it is of better quality and fully a week earlier. In this vineyard it was simply superb in appearance. Very large and beautiful bunches and heavily loaded vines made it very attractive indeed. The grower for market who sets out new vineyards should consider well the claims of this valuable grape.

The Triumph is a large white grape, both bunch and berry, but it is valueless here, as our seasons are too short—it never ripens. On the summit of a hill vineyard stood rows of Niagara and Empire State, side by side, thus affording an excellent chance to compare their respective claims to favor. One could smell the Niagaras when within ten feet of the vines very plainly—a smell that is not calculated to win friends among amateurs, no matter what the public may like. The comparison was largely in favor of the Empire State. The Niagaras had made but a sparse growth, bore but a light crop and the bunches were poorly filled. On the contrary the Empire State had made a vigorous growth and the vines were heavily loaded with very handsome fruit. The bunches were compact and very large, many of them measuring eight inches in length. They certainly presented a most handsome appearance. The fruit was ripening nicely and will doubtless go to market this week.

The Paradox is a grape originated by Mr. Rickett, and now owned by Mr. Barnes, which has not been disseminated. It is a cross, Hartford by Iowa. It colors almost as early as the Champion. The berry is a little smaller than Concord, but the fruit is of much better quality. It promises to be a valuable early grape. It will not be put on the market until it is thoroughly tested.

The Brighton is said to be, and probably with reason, a most capricious grape, varying in productiveness greatly with location. As a rule it is not a successful market grape. On Mr. Barnes' place it is all that could be desired. The vines are hardy and vigorous and they were heavily loaded with crops, the equal of which we have never seen elsewhere. If it continues to do as well it will always command a prominent place in his vineyard.

## Apples in Nova Scotia.

E. L. Wakeman, in a letter to the *Cincinnati Times*, during a trip through Nova Scotia, says of the famous Nova Scotian orchards: I have more faith, however, in Nova Scotia apples than in her gold. The Annapolis and Gaspeau valleys contain about 600 square miles of cultivable land. At the present time one-tenth of the area, or nearly 60,000 acres is planted with apple trees. Almost a half-million barrels of Gravenstein, Baldwin, King of Tompkins, Nonpareil, Russets, Bling Pippins and other varieties of apples are now annually yielded and exported. Over three-fourths of the area is yet in young trees. From 5,000,000 to 10,000,000 barrels of apples will certainly be raised annually in these two valleys within ten years' time. They are proven to be the finest and hardiest varieties in the world, and the demand is never met. In the fall, American buyers fill the region, purchasing in 1,000 barrel lots. Experience has proved that the European markets are just beginning to know this fruit region, and, as every barrel which can now be secured is taken there, the competition between American and English buyers will always insure the Annapolis Valley apple

raisers from \$3 to \$5 per barrel in gold. The method of English shipment is highly interesting and is additional good luck to the Nova Scotia apple farmer. He has only to pack his apples carefully, stencil and brand his name upon it, mark it "John Doe," or "John Roe, London," and deliver it at any depot of the valley railway. If he send 100 or 1,000 in this way he has no further trouble or anxiety. His apples go direct to Halifax. There steamship agents, who are practically agents of London buyers, care for them. In three weeks' time the apple grower receives by mail exchange on London for the apples he has left at the station platform and the price is the highest paid in the world. These conditions are giving a great impetus to the apple culture in this wonderful valley. About forty trees are planted to the acre, and at maturity yield from three to seven barrels of apples, for which never less than \$3, and often more than \$5 per barrel is secured. The whole valley is a vast orchard and every farmer is rich, or rapidly getting rich.

On every apple farm—for the extent of culture has long since passed the orchard area with each apple-grower—from 100 to 10,000 new trees are set out each year. At this rate of development and with the constantly increasing scientific care and attention, the possible limit to apple growing in the Annapolis and Gaspeau Valleys is something startling to contemplate. Six hundred square miles, or 384,000 acres of land are available. All of this rich tract is valued at from \$50 to \$200 per acre. It is almost impossible to purchase at any price. The region may be justly regarded as the very richest in the world, actual results, conditions and possibilities being considered. In wandering through the valley an interesting reflection came to me, and I wondered whether it might be so to others. I was that wherever apples grow, a kindly, sturdy and progressive people are ever to be found. Great houses, greater barns, fine stock, ample competence, large provision for all seasons and needs, sturdy ways, sensible thrift, genial neighbors, and all that dear procession of countryside life that has vigor and cheer, with autumn's noble housings and stores and winter's large and generous delights, marshal the thought in memory's bravest trappings.

## Some of the Newer Pears.

J. J. Thomas, in the *Country Gentleman*, makes mention of some of the newer varieties which have come under his observation: Duhamel du Monceau.—This fine variety has been cultivated for several years by Ellwanger & Barry, of Rochester, and was raised by Leroy of Angers, France. It will be valued to succeed the Winter Nellis. It is of full medium size, pyriform and rounded, regular; skin deep yellow, sometimes with a brown blush to the sun, with nettings of russet, originally the whole surface a rich cinnamon russet, dots numerous; the flesh is a little granular, buttery, and very melting; flavor not very rich, but agreeable and delicious. The tree is vigorous, and bears well. Specimens received from Ellwanger & Barry the middle of January were as melting as any pear in autumn. Frederic Clapp.—Brought to notice by Lemuel Clapp, of Boston, and produced from seeds of the Urbaniste crossed with Superfin, and resembling the latter in flavor. Rather large, roundish, obovate, sometimes irregular in form; the skin bright yellow, without blush or russet, but with many minute dots; flesh light yellow, fine-grained, juicy, melting, with a high vinous flavor. Wilder, or Fox's Wilder.—This is one of the best of the new sorts raised by R. S. Fox, of California, and excels for its fine keeping qualities. We have had specimens this year in fine condition in February. It is rather large in size, obovate pyriform, a little rough, slightly netted with russet; flesh light yellow, a little granular, melting, very sweet, and of excellent quality. The tree is a straggling grower, like Winter Nellis, which will prevent it from becoming very popular with the nurserymen, or with the purchasers of trees. Greene's Wilder.—Introduced by C. A. Greene, of Rochester, is an early pear, of fine quality. Doctor Reeder.—A small, excellent, valuable pear, raised from seed of the Winter Nellis, by Dr. Henry Reeder, of Seneca County, N. Y. The fruit is roundish obovate, with an obtuse suture on one side from stem to apex; the skin is greenish, becoming yellow, with some thin russet; the flesh is buttery and melting, and of fine quality. It ripens in October. The tree is vigorous and productive, and appears to possess the power, like its parent, of resisting the blight; but like its parent, it is a slender grower, and therefore, notwithstanding its general value, will not become popular with nurserymen.

Souvenir du Congrès.—A large and showy pear, of good quality; has given much promise of value, but, as with many other fruits, time develops some drawbacks. The pear is long pyriform; the surface more or less uneven or wavy, rich yellow, often with a red cheek; quality variable; ripens in September and continues some weeks. The tree is rather a poor grower, and so far as limited trial goes we have found it rather liable to blight. Mr. Barry finds it to do best when top-grafted on a strong growing sort, but this is not always entirely successful. But it will doubtless be esteemed by amateurs for its occasional magnificent appearance.

Anasut (known also by the impracticable name of Bonne du Puits Anasut) is classed among the finest of the smaller pears. It is one of the Angers varieties from Leroy. The pear is short obovate, sometimes oblong, pyriform; surface pale greenish yellow, thin, finely russeted; flesh white, fine-grained, juicy and melting, with peculiar sweet, excellent flavor. Its season is September. We have received fine specimens from Ellwanger & Barry. Among the older pears of excellence may be named Josephine de Malines, the season mid-winter and later; Superfin, ripening in October; Pitman, or Pitman's Duchess, a large, handsome, smooth pear, with excellent flavor; and several of the Fox seedlings from California, which much resemble each other in their rounded form and sweet and excellent flavor. The Barry is a good long keeper; Ellwanger & Barry fruited it in 1879, and it ripened March 16, after being two weeks in a warm room. Subse-

quently, specimens were kept into May, in a well-constructed fruit-room. We may not retain our specimens quite so long. If cultivators would provide for themselves good fruit-rooms, which could be kept uniformly cool by admitting cold air in cool nights and closing during warmer days, regulating the temperature with the help of thermometers, fine, delicious, melting pears would be more commonly seen, the winter through, and be of more easy attainment.

## Storing Celery for Winter.

Small quantities for family use can be stored in shoe or other boxes, by first boring inch holes four inches from the bottom at each end and side of the box. Turn the box on end, and pack the celery in layers, the narrow way of the box. To each layer of celery in position sprinkle over the roots only enough earth to mulch them well. Continue until the box is full. When you set the box down shake or jar the box to settle the dirt among the roots of the plants. Then take a watering pot with nozzle and pour water through the auger holes in the ends until the soil is thoroughly saturated and 'tis done. The box can be set in any convenient niche of the cellar, and only needs occasional watering (always through the auger holes) to have a supply of crisp tender celery at short notice, without the trouble of grubbing in the frozen ground and exposing both yourself and the whole lot of celery in the trench.—*Orchard and Garden.*

## Best Soil and Fertilizers for Potted Plants.

What soil to use for potted plants is often a perplexing question to the amateur floriculturist. The discussion of this subject at the recent Florists' Convention in New York, and the opinions expressed by some of the most experienced florists present are therefore of special interest and value to amateur as well as professional plant growers.

Antoine Winter, of Dingee & Conard, was of the opinion that as a rule too rich soil was used. It was better to have the earth too poor than the reverse, as in the former case stimulants in the form of liquid manures could be used as needed.

J. M. Jordan, of St. Louis, said that instead of piling up a heap of sods to rot, he preferred to plow up sod ground in the spring and keep it cultivated through the summer and the early part of the following spring, when he drew it to the greenhouse. If the soil was thin it could be manured previous to plowing. By this practice the soil was thoroughly rotted and aired, and was generally pretty free of cut worms.

Mr. Taylor, a prominent flower-grower near New York, stated that about one-sixth part of rotted cow manure could be safely mixed with the potting soil. He preferred the mixed manure from the cattle stables to the dried droppings in the field, which are much less valuable. Of mineral manures, dissolved sulphate of ammonia he considered the best.

Mr. Foster, of Boston, applied liquid manure made by putting a thumb-pot of guano in a gallon of water and then diluting it one-half. It was used on roses twice a week after watering with clear water. A thumb-pot holds about a heaping tablespoonful. Well-rotted hen-manure that has been kept under shelter may be substituted for the guano.

F. R. Pierson, of Tarrytown, N. Y., used both nitrate of soda and sulphate of ammonia for liquid manure, but considered the latter the best.

From the above it will be seen that the amateur need neither go to the woods nor the wood pile for potting soil, but can procure it in any rich cultivated field where sod was plowed under in the spring. If very clayey it will need sand or fine coal ashes mixed to the amount of one-fifth of the bulk.

He that knows nothing doubts of nothing. Do not let your doubts cause you to waver, for you may be assured that Warner's Log Cabin Liver Pills will cause the sluggish liver to resume its wonted functions and produce the results you desire. They are effective and harmless, being purely vegetable.

## Horticultural Items.

A SHIPMENT of 3,300 barrels of grapes is on the way from New York to Spain.

The *Rural New Yorker* says: "There is not one plant of White Plum eelery raised from a lot of seed received as such, from the Department of Agriculture."

The *Adrian Times* says the exhibit of fruit at the Lenawee County fair was the largest ever made as part of the State. James Holmes, Jr., had 22 varieties of native grapes, and D. G. Edmiston, 10 varieties. These gentlemen also made the largest display of pears. Mr. Collier had some few pears, and showed a Duchess which weighed an ounce over a pound.

The *Pratt Farmer* says: "Practical tests go to show that late-sown oats make a capital winter mulch for strawberry beds. Clean the beds of weeds and sow oats on them in time to make about six inches growth before winter weather kills them down. They do not blow off; they hold the snow and protect the plants, and in spring help to keep the berries clean."

STEPHEN POWERS thinks that a tree which is generously fed and industriously worked, will generally have strength enough to defend itself against those classes of parasites which prey on the bark, leaves or limbs; but perhaps it may need the presence of stock or poultry under them to destroy the germs or otherwise prevent the ravages of the insects which prey on the fruit.

A GROWER of small fruits says: "I use large quantities of manure for all kinds of small fruits. When I began the business I had the idea that much manure would cause the plants to go all to vine, but I find that is a mistake, for the stronger the vine the more fruit. At least I find it so on my soil, which is a rich loamy clay with gravel subsoil, rolling enough to give pretty good drainage."

SALT, to be of value on the asparagus bed, should be used in the form of old brine, which contains nitrate of potash, one of the strongest of fertilizers, and also a nitrogenous extract of meat. It is not the salt but the nitrogen which makes the asparagus grow so luxuriantly. Repeated experiments have proved that salt applied in the usual form is of no special value on the asparagus bed.

The *Orange County Farmer* tells of a curious freak exhibited at the harvest home

meeting of the Westown Farm and Garden Club. It was a limb from a Russet apple tree, not more than half an inch in diameter, which had two small prongs, one of which had on Russets and the other Baldwin apples. There was no graft or anything that could be seen that would cause it. The whole tree is the same.

A CORRESPONDENT of the *Albion Gazette*, who has been visiting the peach orchards of Fennville and vicinity, reports that the long continued dry weather dwarfed the early peaches, and detracted vastly from their commercial value. In fact thousands of bushels of inferior fruit were shipped, which rotted but a mere trifle to the growers, and gave a bad reputation to Michigan peaches. But the orchards are loaded with late varieties, which the late rain will develop, and better peaches and much better prices are confidently expected. F. A. Thomas, of Chicago, bought the fruit of several large peach orchards, at 25 cents per fifth basket, packed and delivered at the station.

## Apianian.

## How to Feed Sugar to Bees.

How to feed is an important question. The ordinary regulating bottle-feeder will be of little service this season; a fast-feeder must be used. There are plenty of these to choose from, and where expense is of little object, any of the boxes of numerous divisions, upon the principle of which most fast-feeders now are made, can be used, but there are other and cheaper methods of making a fast-feeder; the following one we frequently use:

Obtain a tin dish, having almost perpendicular sides; into this place a wood float almost fitting the dish, and having a number of holes, freely dispersed, bored through. We place this on top of the frames, after filling it with syrup, and under the quilts, allowing, by laying pieces of wood across the tin dish, the bees to work up over the edge and take the syrup down. It is not what we call a tidy way of doing it, but it answers as well as the most expensive feeder.

The dish is refilled through the hole in the quilt, and will hold about four pounds of syrup. The quilts must be tucked down snugly around. A good colony with this feeder can be fed up in about ten days or less, if the weather is warm.

It is very noticeable that bee-sugar is objected to by most bee-keepers, and rightly so. Although bee-sugar is, chemically speaking, cane-sugar, it is vastly inferior in its saccharine properties to sugar made from the sugar-cane. If we place a quantity equal in bulk to what we usually find with sugar-cane sugar sufficient for sweetening a cup of tea, it will be found quite unsalted to our taste, necessitating a further addition of at least one-fourth the original bulk. Bees fed on the same do not winter in at all a satisfactory manner, therefore we think that a knowledge as to where to get a sugar free from beet will of great service to our readers, and likewise a comfort to the bees through the rigors of the winter of 1888-89.—*British Bee Journal.*

D. A. JONES, of Bolton, complains that though seventy-five colonies of bees were moved contiguous to 20 acres of buckwheat, at the opening of its bloom, the bees did not store any honey from it, but rather were compelled to use the stores already in the hives. The soil on which the crop grew was very poor, yet the buckwheat grew well and bloomed abundantly. The bees worked on it, but stored no honey. And he wants to know what the matter was.

JAMES HEDDON, in the *Bee Journal*, finds blessings in disguise in the present season's discouragements. He says: The last two very poor honey seasons, will, I am confident, prove a blessing to bee-keepers. It has given us old veterans a splendid education; it has taught us how to make the most of disaster; it is a valuable acquisition to know how to make the most out of our business when good luck favors us, and it is also equally valuable to know how to make the most during disastrous seasons. Besides this, the markets are cleared out, consumers are getting the habit of paying a little more for their honey, and better than all, producers as well as consumers are finding out that bees do not "work for nothing and board themselves," but that intelligent labor and capital are needed to make our business remunerative. The quality of honey in this section is some better than that of last year.

We shall strive to winter our bees to the best of our ability, believing that the honey-production offers more inducements at the present time, than at any time during the past few years.

## NEW ADVERTISEMENTS.

## Salt Rheum

The agonies of those who suffer from severe salt rheum are indescribable. The cleansing, healing, purifying influences of Hood's Sarsaparilla are unequalled by any other medicine. "I take pleasure in recommending Hood's Sarsaparilla, for it has done wonders for me. I had salt rheum very severely, affecting my liver nearly my entire body. Only those who have suffered from this disease in its worst form can imagine the extent of my affliction. I tried many medicines, but failed to receive benefit until I took Hood's Sarsaparilla. Then the disease began to subside, the agonizing itching and pain disappeared, and now I am entirely free from the disease. My blood seems to be thoroughly purified, and my general health is greatly benefited." LYMAN ALLEN, Sexton N. E. Church, North Chicago, Ill.

"My son has salt rheum on his hands and the corners of his legs, so bad that they would crack open and bleed. He took Hood's Sarsaparilla and is entirely cured." J. B. STANFORD, Mt. Vernon, Ohio.

## From 108 to 135

"I was seriously troubled with salt rheum for three years, and receiving no benefit from medical treatment I decided to try Hood's Sarsaparilla. I am now entirely cured of salt rheum; my weight has increased from 106 lbs. to 125 lbs." MISS ALICE BARTY, Stamford, Conn.

If you suffer from salt rheum, or any blood disease, try Hood's Sarsaparilla. It has cured many others, and will cure you.

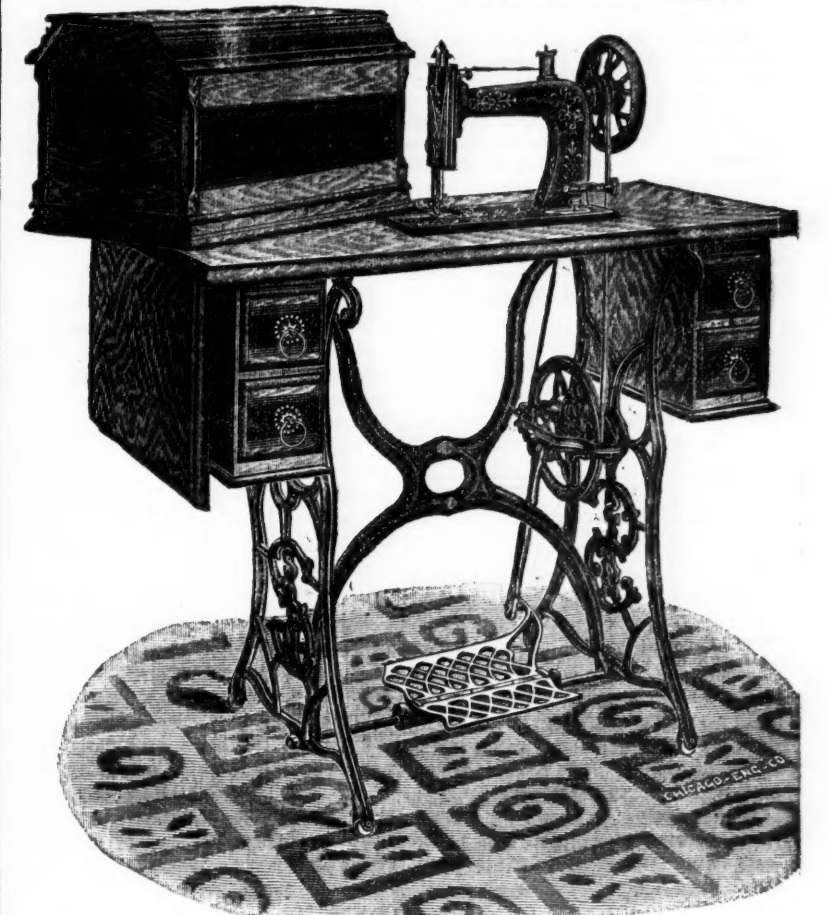
**Hood's Sarsaparilla**  
Sold by all druggists. \$1; six for \$5. Prepared only by C. I. HOOD & CO., Apothecaries, Lowell, Mass.  
100 Doses One Dollar

## NEW ADVERTISEMENTS.

## NEW ADVERTISEMENTS.

Sewing Machines!  
ONE - THIRD PRICE!!THE NEW AND  
GREATLY IMPROVED  
HIGH-ARM SINGER

The Finest and Best Made Machine of the Singer Pattern in the market.



## HIGH-ARM IMPROVED SINGER.

With each of these machines we furnish one Railer, one Tucker, one set Hemmers, one Foot Hemmer, one Sew Driver, one Wrench, one Oil Can and Oil, one Gauge, one Gauge Thumb-Screw, one extra Tread-Plate, one extra Case-Spring, one paper Needles, six Bobbins, and one Instruction Book. These articles are all included in the price named.

Bear in mind that these machines are thoroughly made and of first-class workmanship, and

EVERY MACHINE WARRANTED FOR FIVE YEARS.

These machines furnished to subscribers of the *FARMER* for

**\$18.00!**

Which includes also a year's subscription to the paper. There never was a high-arm machine sold before for less than three times this price.

THE LOW-ARM MACHINE  
OF THE IMPROVED SINGER PATTERN.

PRICE REDUCED TO \$16.00  
Which includes One Year's Subscription to the "Farmer."

Over 1,500 in Use in this State!

The above represents the Machine which we sell at \$16 and throw in a Year's Subscription to the *FARMER*. It is very nicely finished, perfect in all respects, and guaranteed to give satisfaction. We are contracting for large quantities and furnishing them to our customers at about cost. Agents and dealers' profits can be saved and one of the best Machines obtained by ordering from us. A full set of attachments included with each Machine.

## THE HIGH-ARM "JEWEL"

ONE OF THE BEST FINISHED AND HANDSOMEST MACHINES MADE.

PRICE, \$21.00.

Which also includes a Year's Subscription to the "Farmer."

This is the latest improvement in Sewing Machines, and combines all the best qualities of high-priced machines, while it contains others, making it superior to any. Its simplicity is a marvel. It contains but little more than half the number of parts of any Lock-Stitch, or Shuttle Machine. Its new upper feed is very effective in changing from thick to thin goods, the tension may be turned to any angle without raising the pressure foot. It has the newest, perfect, Self-Setting Needle in use, which may be set in the dark. The improved loose wheel works automatically, so there is no necessity of turning screws, loosening springs or catches. This machine makes the nicest stitch of any machine without exceptions. Both sides are so even and regular it is almost impossible to tell the right from the wrong side of a seam.

The attachments, which are furnished with each machine free, are unsurpassed in workmanship, finish or the fine work they will do. The instruction book contains a large engraving of each, with full directions for using. The furniture is black walnut, of the style represented above, and very finely finished. In fact, we claim the "Jewel" to be the best made, and to do better and a wider range of work than any machine in the market.

These Machines Guaranteed for Five Years!

Purchaser pays freight, which runs from 65c. to 90c. on each machine, according to location of purchaser.

**CASH MUST ACCOMPANY ORDERS.**

Samples of these machines can be seen at this office. Address orders to

**GIBBONS BROTHERS,**

DETROIT, MICH.











Poetry.

OWNERSHIP.

Old Farmer Boggs, of Boggy Brook,  
Went to the county fair,  
And with his wife he strolled round  
To see the wonders there.  
"That horse," he said, "Grey Eagle Wing,  
Will take the highest prize;  
But our old Dobbin looks as well  
And better to my eyes.  
He is a know what folk call slow,  
It's far the safest way to go;  
Some folks, perhaps, might think it strange,  
I really shouldn't like to change."  
And those that own, Buck and Bright  
Don't have so large a grudge.  
Nor match like them to a hair,  
But I know what they're worth.  
They're good to plow and good to draw.  
You stronger pullers never saw.  
And always mind the "gee" and "haw."  
Some folks, perhaps, might think it strange,  
I really shouldn't want to change."  
That Devon tetter cow, I heard,  
A thousand dollars. Now,  
Said Mrs. Boggs, "my Crummet Horn  
Is just as good a cow."  
Her milk is the yellowest;  
Some folks, perhaps, might think it strange,  
I really shouldn't want to change."  
"Those premium hogs," said Mrs. Boggs,  
"My little Chesire pig  
Is better than the best of them.  
Although he's not so big.  
And that young Jersey is not half  
So pretty as old Bridget's calf;  
Nor is there in the poultry pen  
As speckled wings so good a hen!"  
As farmer Boggs to Boggy Brook  
Rode homeward from the fair,  
He said: "I wish my animals  
Had all of them been wise  
And if the judges had been wise  
I might have taken every prize!"

HOW SHE EXPLAINED IT.

My sweetheart is just four years old,  
And when I said good-night  
I kissed her on her rosy lips,  
For grandpas have the right.  
The maiden wiped my kisses off,  
And full of coquetry  
Was the willful pout and the roguish glance  
My darling gave to me.  
Why, sweetheart! wipe my kisses off?  
Now I think that's a sin!  
"I didn't wipe it off," she said,  
"I only rubbed it in!"

Miscellaneous.

"THE HOUSE OF A TRAITOR."

As you leave Porte Vecchio, and go  
northwest toward the interior of Corsica,  
the land rises rapidly, and after three  
hours' traveling through winding paths, ob-  
structed by huge rocks and often cut by  
deep ravines, you find yourself on the edge  
of an extensive maquis. The maquis is the  
country of the Corsican shepherds and of  
those who are at enmity with justice. You  
must know that the Corsican laborer, in  
order to spare himself the trouble of manur-  
ing his fields, sets fire to a certain extent  
of wooded land. So much the worse if the  
flames spread farther than is necessary, but  
then he is sure to have a fine harvest, when  
he sows his seed in this soil, fertilized by the  
ashes of the trees it once bore. The grain,  
reaped and carried away (for they leave the  
straw, which it would be troublesome to  
gather), the old roots, which have remained  
in the earth unconsumed by the flames,  
shoot forth in the following spring very  
thick branches, which in a few years attain  
the height of seven or eight feet. It is this  
kind of heavy underbrush that goes by the  
name of maquis. It is composed of differ-  
ent kinds of trees and shrubs, mixed and  
confounded as the good God pleases. A  
man can only open a passage through it  
axe in hand, and maquis have been known  
so thick and bushy that the mountain sheep  
themselves cannot get through.

If you have killed a man, fly to the maquis  
of Porte Vecchio, and you will live there in  
safety, provided with a good gun, powder  
and ball—do not forget a brown covered  
cloak, which will serve as both mattress and  
covering. The shepherds will give you  
milk and cheese, and chestnuts, and you  
will have nothing to fear from justice, or  
the relations of the defunct, except when  
you will be obliged to go to the town to re-  
new your ammunition.

Mateo Falcone, when I was in Corsica,  
lived about half a league from this country.  
He was quite rich for that country, living  
"nobly," in Corsican phrase (that is to say,  
without working himself), from the produce  
of his flocks, which the shepherds, a kind  
of nomadic race, pastured here and there in  
the mountains. When I saw him, two  
years after the events I am about to relate,  
he appeared about 50 years old, at the most.  
Imagine a small, but robust man, with crisp,  
curly hair, black as jet, an aquiline nose,  
thin lips, large bright eyes, and a skin of  
deep tan color. His skill in shooting passed  
for something extraordinary, even in this  
country, where there are so many good  
shoots. For instance, Mateo would never  
shoot at a mouflon with a gun loaded with  
bullet, but at a hundred and twenty  
paces he would kill it by a ball in the head  
or shoulders, as he chose. He used his gun  
as well at night as in the daytime—and they  
related the following evidence of his skill,  
which might appear incredible to one who  
has not traveled in Corsica. At eighty  
paces distant a lighted candle was placed  
behind a transparent paper as large as a  
plate. He took aim, then the candle was  
extinguished, and at the end of a moment's  
time, in the most utter darkness, he shot  
and pierced the paper three times out of  
four! Endowed with such transcendent  
merit Falcone had attained a great reputa-  
tion. He was said to be as good a friend  
as he was a dangerous enemy, and, besides  
being neighborly and charitable, he lived in  
peace with all the world, in the district of  
Porte Vecchio.

But it was also told of him, when at  
Corte, where he married his wife, he had  
rid himself in a vigorous manner of a rival  
who was as dreaded in war as in love—at  
least, a certain shot which was surprised  
this rival, as he was shaving before a little  
mirror hung in his window, was attributed  
to Mateo. The affair having died out at  
first, his wife had brought him at Mateo  
three daughters (to his great rage), and  
finally a son, whom he named Fortunato.  
He was the hope of the family, the heir to

his name. The girls were all married;  
their father could reckon, when needed,  
upon the daggers and carbines of his sons-in-  
law. The boy was only ten years old,  
but of a promising character.

One fine day in autumn Mateo went early  
with his wife to visit one of his flocks in a  
clearing in the maquis. The little Fortunato  
desired to go with him, but the clearing was  
too far off, and, besides, some one must  
remain to guard the house. So the father  
refused.

He had been gone some hours, and little  
Fortunato was lying quietly in the sun,  
gazing at the blue mountains and thinking  
how he was going to dine next Sunday in  
the town with his uncle, when his medita-  
tions were suddenly interrupted by a gun-  
shot. He jumped up and turned toward  
the side of the plain whence proceeded this  
noise. Several shots followed at regular  
intervals, approaching nearer and nearer,  
till suddenly, in the path which led from  
the plain to Mateo's house, appeared a man  
wearing a long beard and a pointed cap,  
such as the mountaineers wore; he was  
covered with rags, and dragged himself  
painfully along, leaning on his gun. He  
had just been shot in the thigh.

This man was an outlaw, who, having  
gone during the night to buy powder in the  
town, had on his way fallen into an ambush  
of Corsican police. After a vigorous de-  
fense he had succeeded in making good his  
retreat, hotly pursued and firing from rock  
to rock. But he was not far in advance of  
the soldiers, and his wound made it impos-  
sible for him to reach the maquis before  
being caught.

He approached Fortunato and said to  
him: "You are the son of Mateo Falcone?"

"Yes," said the boy.

"I am Giannetto Sanpiero. The soldiers  
are after me. Hide me, for I can go no  
further."

"And what will my father say if I hide  
you without his permission?"

"He will say you have done well."

"Who knows?"

"Hide me quickly; they are coming!"

"Wait! Curses on you! They will be  
here in five minutes. Come! hide me, or I  
will kill you!"

Fortunato replied, with the greatest cool-  
ness: "Your gun is not loaded, and there  
are no more cartridges in your belt."

"I have my stiletto—"

"But can you run as fast as I can?" And  
the boy darted off and placed himself out of  
the bandit's reach.

"You are not Mateo Falcone's son!  
Will you let me be arrested before the door  
of your house?"

The child appeared moved with compas-  
sion.

"What will you give me if I hide you?"  
said he, drawing near.

The outlaw fumbled in a leather pocket,  
which hung from his belt, and drew from it  
a five-franc piece, which he had doubtless  
saved for the purchase of powder. Fortunato  
smiled at the sight of the money and, seizing  
it, said to Giannetto:

"Fear nothing. I will hide you well."

Then he made a great hole in a heap of  
straw, or hay, near the house. Giannetto  
crawled in, and the child covered him up so  
as to leave him a little air to breathe, with-  
out it being possible to suspect at a casual  
glance that this heap of hay could hide a  
man. Moreover with a cunning ingenuity,  
worthy of a savage, he caught a cat and her  
kittens, and placed them on top of the  
straw, as if it had not been moved for  
some time. Finally, noticing traces of  
blood on the path, he carefully covered them  
with dust, and then calmly lay down again  
in the sun.

A few moments after six men in brown  
uniforms, with yellow collars, and com-  
manded by an adjutant, were before Mateo's  
door. This adjutant was a distant relative  
of Falcone. He was called Teodoro Gamba,  
an active man, much feared by the outlaws,  
of whom he had already captured several.

"How do you do, little cousin?" said he,  
smiling, to Fortunato. "How you have  
grown! Have you seen a man pass here,  
lately?"

"Oh! I am not a big as you, my cousin,"  
said the child, with an air of simplicity.

"That will come by-and-by. But have  
you not seen a man pass here? Tell me."

"Have I seen a man pass?"

"Yes; a man with a pointed cap of black  
velvet, and a vest embroidered with red  
and yellow."

"A man with a black pointed cap, and a  
vest embroidered in red and yellow?"

"Yes, yes—answer quickly, and don't  
repeat my questions."

"This morning I saw a man pass by our  
door on his horse, Piero. He asked me how  
papa was, and I told him—"

"Ha! little villain; you are playing the  
rogue. Tell me quickly which way Gian-  
netto went, for it is he I am after, and I am  
certain he took this path."

"Who knows?"

"Who knows?" roared the adjutant; "I  
know that you have seen him!"

"Can one see all passers-by when one is  
asleep?"

"You were not asleep, good-for-nothing  
little wretch; the gunshots must have  
wakened you."

"You think, then, my cousin, that your  
guns make a great noise? My father's car-  
bine makes a much louder one."

"May the devil confound you! I am  
very sure you have seen Giannetto. Per-  
haps you have hidden him. Comrades, go  
into the house and see if our man is not  
there. He was dragging along on one foot,  
and he knows too much, the rogue, to try  
and reach the maquis while limping in this  
manner. Besides, the marks of blood stop  
here."

"And what will papa say," asked Fortu-  
nato, "when he knows people have entered  
his house when he was absent?"

"Rascal!" said the adjutant, seizing him  
by the ear; "do you know that I can make  
you sing another tune? After I have given  
you twenty blows with the flat of a sword  
you will speak."

"My father is Mateo Falcone," said Fortu-  
nato, with emphasis.

"Do you know, you little scoundrel, that  
I can take you away to Corte, or Bastia;  
that I can put you in a dungeon on straw,  
with chains on your ankles, and I will have  
you guillotined, if you do not tell me where  
Giannetto Sanpiero is?"

The boy burst out laughing at this absurd  
threat, and repeated: "My father is Mateo  
Falcone."

"Adjutant," said one of the soldiers, in

a low tone, "beware of quarrelling with  
Mateo."

Gamba was evidently embarrassed. He  
talked in a low voice with his men, who  
had already searched the house. It was not  
a lengthy operation, for the cabin of a Cor-  
sican contains but a single square room.  
The furniture consists of a table, some  
benches, a chest or two, and hunting and  
cooking utensils. Meanwhile, the little boy  
played with the kittens, and seemed to take  
a malicious joy in the evident confusion of  
his cousin and the soldiers.

One of the latter approached the heap of  
straw, and he saw the cat, and carelessly  
thrust his bayonet into the straw, shrugging  
his shoulders, as if he felt the precaution  
was ridiculous. Nothing stirred, and the  
child's face betrayed not the slightest emo-  
tion. The adjutant and his troop were in  
despair. Already they looked seriously at  
the plain as if disposed to return whence  
they came, when their chief, convinced that  
threats produced no impression on Falcone's  
son, resolved to make a last effort, and try  
the effect of caresses and bribery.

"Little cousin," said he, "you seem a  
very wide-awake fellow, you'll make your  
mark; but you are playing an ugly game  
with me, and if I was not afraid of giving  
pain to my cousin Mateo, may the devil  
catch me! but I would carry you off with  
me."

"Bah!" said the child.

"But when my cousin Mateo returns I  
shall relate the whole affair to him, and he  
will whip you till the blood comes for hav-  
ing lied to me."

"Really?"

"You will see—but hold—you are a fine  
boy, and I will give you something."

"And I, my cousin, will give you a piece  
of advice, which is, if you wait much longer  
Giannetto will be in the maquis, and then  
it will need more than one strong fellow  
like you to go and find him."

The adjutant drew from his pocket a sil-  
ver watch, worth about ten crowns, and,  
observing that the eyes of the child sparkled  
at the watch dangling by its steel chain:

"Would not you be delighted to have a  
watch like that hanging from your neck?  
You would walk the streets of Porte Vecchio  
as proud as a peacock, and when people  
would ask you, 'What o'clock?' then you  
could say, 'Look at my watch and find  
out!'"

"When I am a big boy my uncle will  
give me a watch."

"Yes, but your uncle's son already has  
one; not as handsome as this, to be sure,  
but then he is younger than you."

The child sighed.

"Well, do you want this watch, little  
cousin?"

Fortunato, glancing at the watch from  
the corner of his eye, resembled a cat to  
whom you offer a chicken. As it feels you  
are joking, it darts not put its paw on the  
fowl, and from time to time turns away its  
eyes, so as not to yield to the temptation,  
but licks its chops every minute, and seems  
to say to its master, "Your joke is a very  
cruel one!"

However, the adjutant seemed sincere in  
offering his watch. Fortunato did not  
stretch out his hand, but said, with a bitter  
smile, "Why do you joke with me?"

"By heaven! I am not joking; only tell  
me where Giannetto is, and the watch is  
yours."

Fortunato smiled incredulously, and fix-  
ing his black eyes on those of the adjutant,  
he tried to read there how much to believe  
of what he said.

"May I lose my epaulettes!" cried the  
adjutant, "if I do not give you this watch,  
provided you do as I ask. My men are  
witnesses, and I can not retract my promise."

As he spoke he held the watch nearer, so  
that it almost touched the child's face. For-  
tunato showed plainly in his face the struggle  
in his soul between covetousness and the  
respect due to hospitality. His naked  
breast heaved violently, and he seemed half  
suffocated. However, the watch continued  
to turn and twist about, and sometimes  
struck the end of his nose. Finally, little  
by little, his right hand rose slowly toward  
the watch, the ends of his fingers touched it,  
and he felt its weight before the adjutant  
dropped the end of the chain. The dial-  
plate was sky-blue, the case newly polished,  
and in the sun it shone like fire. The  
temptation was too strong!

Fortunato raised his left hand slowly,  
and pointed with his thumb over his left  
shoulder at the heap of straw. The adjutant  
instantly understood his gesture. He let go  
the end of the chain, and Fortunato felt  
himself sole possessor of the watch. He  
arose with the agility of a deer, and ran  
a few steps from the heap of hay, when the  
soldiers immediately commenced to over-  
turn. It was not long before a man, covered  
with blood, poniard in hand, crawled out,  
but, as he tried to rise to his feet, his  
wounded thigh would not allow him to  
stand erect. He fell, and the adjutant  
threw himself upon him, and seized his  
stiletto, and he was soon securely tied,  
despite his struggles. Lying on the ground,  
and bound up like a fagot, Giannetto  
turned his head towards Fortunato and  
hissed, "Son of a dog!" The child tossed  
back the five franc piece Giannetto had  
given him, feeling that he had ceased to de-  
serve it; but the outlaw paid no attention  
to this movement. He said coolly to the  
adjutant:

"My dear Gamba, I can not walk; you  
will be forced to carry me to the town."

"You ran quicker than the squirrel  
while ago," replied the cruel conqueror;  
"but easy; I am so glad to have caught  
you that I could carry you for a league on  
my back without fatigue. As for the rest,  
comrade, we will make you a litter out of  
some branches and your cloak, and at  
Crespote's farm we shall find horses."

"All right," said the prisoner, "put also  
a little straw on the litter, that I may lie  
easier."

While the soldiers were employed, some  
in making a kind of litter out of branches,  
and the others in dressing Giannetto's  
wound, Mateo Falcone and his wife sudden-  
ly appeared at the turn of the path which  
led to the maquis. The woman walked  
slowly, bending painfully under the weight  
of an enormous sack of chestnuts, while her  
husband strolled by her side, carrying on  
his two guns, one in his hand, the other in  
his shoulder belt, as if he was unworthy of a  
Corsican to carry any burden but his arms.

As he caught sight of the soldiers his first

idea was that they came to arrest him. But  
why? Had Mateo any trouble with the law?  
No; he enjoyed a good reputation, but he  
was also a Corsican and a mountaineer, and  
there are few such, in searching their  
memory, can not recall some peccadilloes,  
such as gun shots, dagger thrusts, and other  
like trifles. Mateo, more than the most of  
men, had a clear conscience in this respect,  
for more than ten years he had aimed his  
gun at no man. But he was, however, pru-  
dent, and he took a position to make a  
brave defense, if necessary.

"Wife," said he to Giuseppa, "put down  
your sack and be ready."

She obeyed immediately. He gave her  
the gun from his shoulder belt, which might  
cramp his movements. He then loaded the  
one he held, and advanced slowly toward  
the house, skirting the trees, which bordered  
the road, ready, at the least hostile demon-  
stration of the soldiers, to throw himself  
behind the largest trunk, whence he could  
fire under shelter. His wife followed in  
his tracks, holding the spare gun and its  
cartridge-box—the business of a good house-  
wife is to load her husband's gun in case  
of a combat.

On the other side of the field the adjutant  
was much troubled at seeing Mateo advance  
in this manner, with measured steps, gun  
in hand, and his finger on the trigger. "If,  
perchance," thought he, "Mateo should be  
a relative of Giannetto, or his friend, and  
he wished to defend him, the contents of  
his two guns could reach us, one after the  
other, as sure as a letter by the post, if he  
aimed at me, notwithstanding our relation-  
ship."

In this perplexity he took a brave  
resolution to advance alone towards Mateo,  
and relate the whole affair to him, accusing  
him as an old friend; but the short distance  
that separated him from Mateo appeared  
terribly long.

"Ah, my brave comrade," cried he, "how  
goes it? It is I, Gamba, your cousin."

Mateo, without replying, had stopped,  
and, while the other spoke, slowly raised  
the barrel of his gun, so that it pointed to  
the sky at the instant the adjutant reached  
him.

"Good-day, comrade," said the adjutant,  
holding out his hand; "it is a long time  
since I last saw you."

"Good-day, comrade!"

"I came to say how do you do, as I  
passed, to you and my good cousin Pe-  
pa. We have made a long journey to-day,  
but we must not complain of fatigue, for we  
have made a famous capture. We have just  
seized Giannetto Sanpiero."

"God be praised!" cried Giuseppa; "he  
stole a milk-cow from us last week."

These words rejoiced Gamba.

"Poor devil," said Mateo; "he was  
hungry."

"The knave fought like a lion," con-  
tinued the adjutant, somewhat mortified;  
"he killed two of my men, and not content  
with that, broke Corporal Chardon's arm—  
but that is no great harm, he is only a  
Frenchman. Afterward he was hidden so  
finely that the devil himself could not have  
found him. I should never have discovered  
him had it not been for my little cousin,  
Fortunato."

"Fortunato!" exclaimed Mateo.

"Fortunato!" said Gamba; "yes, Gian-  
netto was hidden under that heap of straw  
yonder. But my little cousin showed me  
his hiding place. So I will tell his uncle in  
town, and he can send him a fine present  
for his trouble. And his name and yours  
will appear in the report that I shall send to  
the attorney-general."

"Damnation!" said Mateo, in a thick and  
husky voice.

He had reached the detachment by this  
time, Giannetto was already lying on the  
litter, and ready to depart. When he saw  
Mateo in Gamba's company he smiled  
strangely, then, turning his head toward the  
door of the house, he spat savagely on the  
dirt, crying, "The house of a traitor!"

Only a man who had resolved to die would  
have dared to use the word "traitor" in  
connection with Falcone. A stab from a  
stiletto would have immediately avenged  
the insult. But Mateo made no other ges-  
ture than carrying his hand to his head, as  
if overcome with grief. Fortunato had  
gone into the house when he saw his father  
arrive, but he soon reappeared, carrying a  
bowl of milk, which he offered to the  
prisoner, his head hanging down.

"Away, cur!" cried the outlaw to him.  
Then, turning to one of the guard, "Com-  
rade," said he, "give me a drink."

The soldier handed him his gourd, and  
Giannetto drank the water given him by a  
man with whom he had just exchanged  
blows. Afterward he begged that they  
would tie his hands so that they were  
crossed on his breast instead of having  
them bound behind his back.

"I like," said he, "to lie at my ease."

They hastened to satisfy him; then the ad-  
jutant gave the signal of departure, bade  
adieu to Mateo, who did not reply, and they  
descended with rapid steps toward the  
plain.

Ten minutes passed before Mateo opened  
his mouth. The child looked uneasily,  
sometimes at his mother, then at his father,  
who, leaning on his gun, looked at him  
with an expression of furious anger.

"My father!" cried the child, advancing,  
tears in his eyes, as if to throw himself at  
his knees. But Mateo cried: "Back!" and  
he stopped, sobbing and motionless, a few  
steps from his hearth.

Giuseppa drew near. She had just per-  
ceived the chain of the watch, one end of  
which hung from Fortunato's shirt.

"Who gave you that watch?" she asked,  
in a severe tone.

"My cousin, the adjutant."

Falcone seized the watch, and throwing  
it violently against a stone broke it into a  
thousand pieces.

"Woman," said he, "is this my child?"

The brown cheeks of Giuseppa turned a  
vivid scarlet. "Have a care what you say,  
Mateo. Do you remember to whom you  
speak?"

"I ask your pardon, wife. This child,  
then, is the first of the race of Falcone who  
has been guilty of treachery!"

The sobs and tears of Fortunato re-  
doubled, and Mateo kept his lynx eyes  
sternly fixed upon him. Finally he struck  
the butt-end of his gun on the ground,  
toward the maquis, bidding Fortunato fol-  
low him. The child obeyed.

Giuseppa ran after Mateo and seized his  
arm. "He is your son," said she, in a  
trembling voice, fixing her black eyes on

those of her husband, as if to read there  
what was passing in his soul.

"Leave me," said Mateo, "I am his  
father."

The mother embraced her son and en-  
tered the house weeping; throwing herself  
on her knees before an image of the Virgin  
she prayed fervently.

Meanwhile, Falcone walked down the  
path some 200 paces, and stopped on reach-  
ing a little ravine. He sounded the earth,  
and found it soft and easy for digging.  
The spot appeared a favorable one.

"Fortunato," said he, "stand yonder  
near that great stone."

The child obeyed, and fell on his knees.

"Say your prayers," said Falcone.

"My father, my father, do not kill me!"

"Say your prayers," repeated Mateo, in  
a voice which made the child's flesh creep.

The child, sobbing and stammering, re-  
peated the "Pater Noster" and the "Credo."

At the end of each prayer the stern father  
responded "Amen."

"Are those all the prayers you know?"  
asked he.

"My father, I also know the 'Ave Marie,'  
and the litany my aunt taught me."

"Repeat them!"

The child finished the litany in a sinking  
voice.

"Have you finished?"

"Oh! my father, forgive me. Mercy! I  
will never do it any more! I will beg my  
cousin, the adjutant, so hard he will release  
Giannetto."

He was still speaking—Mateo raised his  
gun and took aim, saying: "May God par-  
don you!"

The child made a desperate effort to rise  
and embrace his father's knees, but it was  
too late; Mateo fired, and Fortunato fell,  
stone dead.

Without casting a glance at the body  
Mateo took his way back to the house to  
get a spade to dig his son's grave. He had  
gone but a few steps when he met Giuseppa,  
who was running toward him, alarmed at  
the noise of the shot.

"What have you done?" she shrieked.

"Justice!"

"Where is he?"

"In the ravine. I am going to bury him.  
He died like a Christian. I made him recite  
his prayers. God rest his soul!"—San  
Francisco Argonaut.

Will Carleton at Home.

There are few authors who so thoroughly  
reflect their personality in their work as  
does Will Carleton. To thousands who  
know him only through his writings, he is  
"the poet of the fireside," to his family  
and friends he is the lover of the home  
hearth. His early life was passed on his  
father's farm, and here, doubtless, was de-  
veloped that interest in the pathos and  
tragedy of rural domestic life which is so  
strikingly apparent in his verse.

Some time ago, Mr. Carleton selected  
Brooklyn as his place of residence, and  
there, in one of the most desirable portions  
of the city, he has built for himself a home.  
It is a comfortable, almost a luxuriously  
furnished house, representing a portion of  
the profits that have accumulated from the  
poet's published works. With him lives his  
aged mother, and his devotion is divided  
between her and his wife. He is not a  
methodical worker, and does not allow him-  
self to be governed by any system. At  
times a poem will be entirely outlined in  
his mind before he sits down to write it  
out; at other times he goes to his desk  
without the least idea of what the effort will  
result in. With Mr. Carleton the construc-  
tion of a poem involves labor and care, and  
he never allows himself to be hurried. He  
invariably chooses the morning for literary  
work. His desk is in the upper portion of  
the house, and here he does his reading as  
well as his writing.



## THE BURDEN.

To every one on earth  
And give a burden to be carried down  
The road that lies between the cross and crown;  
No lot is wholly free;  
He gives one to thee.  
Some carry it aloft;  
And visible to all eyes;  
And all may see its form, as light and shade;  
Some hide it in their breast,  
And none seem to be thus unguessed.

Try burden is God's gift,  
And it will make the bearer calm and strong;  
Let it press too heavily and long,  
He says: Cast it on Me,  
And it shall ease thee.

And those who bear His voice,  
And seek to give it to the world,  
And quiet hearts that never can despair;  
And hope lights up the way  
Upon the darkest day.

Take then thy burden thus,  
And let it be thy lot to bear;  
And whether it be sorrow or defeat,  
Or pain, or sin, or care,  
O leave it calmly there.

## FACTS ABOUT MARBLE.

## How the Rugged Rock is Converted Into

Polished Variegated Slabs.  
Few people who stand before a finished  
mantel or a table, and admire the high-  
polished variegated marble, says the New  
York Commercial Advertiser, realize the  
amount of time and labor that have been  
expended in the evolution of the completed  
structure from the raw materials. The  
highly-colored varieties are found chiefly in  
Italy, Spain, France, Belgium, or Portugal.  
The white stone is common in this State.  
Among the marbles which most frequently  
enter into composition of fancy apparatus  
are—

Italian—white, vernal and clouded, with blue  
gray; Etrurian—pale porcelain white, blue  
gray; Carrara—pale blue, veined with dark  
gray; Egyptian—pale yellow, clouded with  
blue and veined with olive and brown; Tene-  
bra—dark blue, veined with white; Grotto  
Fleur-de-lis—richly mottled, yellow, pur-  
ple, brown, white and red; Violet Brocade—  
purple, mottled and veined with golden yellow;  
Labrador—dark blue, veined with white; Grotto  
Fleur-de-lis—richly mottled, yellow, pur-  
ple, brown, white and red; Violet Brocade—  
purple, mottled and veined with golden yellow;  
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Except when designated for statuary or  
other purposes the first thing the manu-  
facturer does is to place the block of marble  
under a gang-saw in order to saw it into  
slabs. The gang-saw consists merely of a  
series of parallel saws, to which are attached  
motors imparted motion by which they are  
kept from the gang-saw the slabs are generally  
about 1 1/2 inches thick, so that they may  
be used in a box, slab, or in a wall, or in  
other ways. The slabs are then inspected. To  
the experienced eye the rough slabs are much  
like, and while the good qualities of the  
slab are only fully brought out under the  
polisher's hand, the imperfections are  
also magnified very much. It is there-  
fore necessary to detect flaws before the  
rubbing begins.

The perfect slabs are sent into required  
pieces. The slabs are passed to the rub-  
bing bed to be rubbed smooth. The rubbing  
bed consists of a solid horizontal cast-iron  
bed about four inches thick and usually  
about two feet square. In the center of the  
bed is a fixed vertical shaft which carries  
a stone foundation, and the entire struc-  
ture is made as true and as steady as pos-  
sible. It requires a great deal of care and  
attention to keep the rubbing-bed perfectly  
true, and it is sometimes necessary to rub  
the slabs a whole week with bluestone in  
order to keep the surface smooth.

When the slabs leave the rubbing-bed it  
is comparatively smooth, and is ready to be  
sent into its final shape. It then comes  
under the hands of the polishers, who are  
provided with rubbers made of ordinary  
rubber rolled up into a mop of about three  
feet in diameter and sewed firmly  
together and through, and with these they  
rub the surface of the slab back and forth,  
hour after hour, until they bring out the high  
polish so much admired. The marble is  
then rubbed with grit, then with pumice-  
stone, and then with bone. On some of the  
finest slabs of surface polished stone one  
man four hours of steady work.

In gliding, four or five gold leaves are  
applied to a cushion made of a board cov-  
ered with chamois. The glider cuts it into  
strips a quarter of an inch wide, lays it on  
the marble with his "tip," then "coats"  
it on, after which he rubs it down with a  
fine hair brush in order to smooth the laps  
and form an even and continuous surface.  
A bank of fine marble dust, and a  
great dexterity is acquired by gliders, and  
they seem to handle with the greatest ease  
the delicate gold leaf which the slightest  
breath of air is sufficient to carry off, and  
which an experienced hand is utterly un-  
manageable.

The variegated, dark-colored marbles are  
not expensive, but they are also generally  
more durable, as well as more  
valuable. The common white marble, which  
is not so valuable from an ornamental point  
of view, has a separate value as being the  
best basis for the production of carvings  
and for the manufacture of "soda" wa-  
ters and all other carbonated beverages, and  
a large trade is done in it for this purpose.  
It has succeeded whitening and bicarbonate  
of soda in this respect on account of its  
cheapness. A bank of good marble dust,  
weighing about 400 pounds, costs \$1.25. An  
equal quantity of whitening costs \$8.50,  
and produces no more gas. A like weight  
of bicarbonate of soda produces a double  
amount of gas, but costs about \$7.

As far as chemical composition is con-  
cerned marble and whitening are analogous—  
both are carbonates of lime, and when  
applied pure both contain the same amount  
of lime. Whitening, however, is  
purely, if ever, as pure as marble dust,  
which is chiefly of the remains of extremely  
small animals.

## Death-Giving Oxygen.

It is a curious fact, discovered by Dr. B.  
Richardson, that pure oxygen becomes  
poisonous when it is inhaled. This was  
discovered in a current of freshly-made,  
pure oxygen was inhaled, and the subject  
never recovered sleep; but when the oxy-  
gen, once inhaled, was freed from all known  
impurities and again supplied, the animals  
readily became drowsy, fell asleep, and  
after successive inhalations of the purified  
gas, expired. It was evident that, in breath-  
ing, the oxygen had undergone some change  
which rendered it poisonous. What the change  
was only became known, though Dr. Rich-  
ardson has found that if the exhausted oxy-  
gen is electrically charged it is revitalized,  
and will again support life.

## GOING TO CONGRESS.

The Amount a Candidate Fre-  
quently Pays to Get a Seat.Legislative Honors and the String Tied  
To Them—A Long Pursue the Most Effec-  
tive Campaign Document the  
Country Over.

"What does it cost to come to Congress?"  
said a veteran Representative, repeating  
the query of the Washington correspondent  
of the Philadelphia Press. "Well, there  
would be three hundred or more different  
things, from this to that, and a year's  
salary, or half of the salary for the term,  
that is to say, \$5,000."  
"Does your estimate cover the cost of  
Senator's Congress?"  
"No, indeed. If we count in Senators, the  
average would run a good deal higher. By  
'member' we mean a member of the House  
of Representatives. Some members get  
with little or no expenditure of money;  
others are elected from the very 'go.' Those  
from the large cities, as a rule, find the  
Congressional toy and their pretty title of  
"Honorable" most expensive, but it is not  
always the man's ability or general fit-  
ness are minor considerations. Long polit-  
ical careers something in mitigating the  
damages, but a long purse is the most ef-  
fective campaign document the country  
over. Even when a man has no position  
he has to come down with the cash to buy  
off for campaign machinery. Take the case  
of Amos Cummings, the bright newspaper  
man who represented the Sixth New York  
district. The nomination of his party came  
to him through the silver mine. It was  
what we call a 'dead sure thing.' The  
nomination equivalent to election—but, all  
the same, Amos had to spend probably  
\$5,000 before he drew a month's salary as a  
member of Congress."

"For what?"  
"Oh, for many things. For assessments  
by campaign committees, for the main-  
tenance and equipment of clubs and other  
political organizations, for bonnets, balls,  
picnics and excursions; for banners and  
banner raisings, for charities to the poor  
and needy of the district, and to boats and  
buntings, and to the various expenses which  
he cannot not reciprocate, and who would  
cost of Congressional honors to a man like  
Cummings, in a district like his, is small  
compared to the outlay required of men like  
Belmont and Bliss, of New York; Bayne,  
of Pittsburgh; and of men like Belmont,  
Morse, of Boston, and Feltus, of Philadel-  
phia. In addition to being good fellows and  
good liveries they are expected to be men of  
wealth, and must pay to sustain their rep-  
utation. Yet every one of these expenses might  
have been avoided, and the members  
have an experience and an acquaintance with  
methods in legislation which should yield  
him a biennial dividend in a certificate of  
election clear of cost."

"It is to be said, however, that after a  
few years here a fellow learns to avoid  
many of the money traps that beset the  
Congressional aspirant and the novice in  
Congressional life. Politics is like any other  
game, and the experienced player, to a begin-  
ner, although a beginner may not and then win  
a big pot on a small stake."  
"No, I do not call William L. Scott a be-  
ginner. He probably paid a bigger price  
than any of us for his position, but he knew  
what he was about, and fought the damage  
beforehand. Probably \$25,000 were expended  
legitimately, as campaign expenses go,  
in such an undertaking. I know men who  
have spent as much as \$50,000, and failed.  
Just let a known millionaire take a Republican  
nomination in one of the New York districts  
with a top-heavy Democratic majority and  
you will see it easy enough to get rid of a  
year's interest on his fortune. The fortune  
of Rice and the late Larry Jerome, though  
hardly millions, realized this."

"What about the men who read their title  
clear of term after term, without much ex-  
pense?"  
"There are such Congressmen, but I must  
say that they are growing fewer every  
year. At the head of the list stand old war-  
riors like Kelley and Randall, Holman  
and Cox, and acknowledged party leaders  
like Reed and Carlisle, who have become  
more valuable to their districts than their  
districts are to them, and who can afford to  
spend as much as they like on the strikers  
and camp-followers, but at local bosses.  
Generally, however, the men who find  
their way into Congress the hard way, and  
who are not so much a matter of money.  
In the South, particularly, oratorical gifts,  
or 'talent' of one sort or another, goes about  
as far as money, and a war record or per-  
sonal popularity, such as that of the late  
General Sherman, is a great asset. The  
talent or money. Then if a Southern or  
Western youngster manages to make a hit,  
however small, in his first term, State or  
local pride is very apt to make him his own  
successor. Money from his own district  
by placing nooses about their legs until he  
and myself had walked to the other end of  
the course. Then, at a signal from the doc-  
tor, the birds were released, and the race  
began. It seemed to me these birds ran  
freed four hundred feet at every stride. Like  
the wind they came, their great necks  
stretched forward and upward to their ut-  
most length, their wings, like arms, work-  
ing with a motion similar to that made by  
their legs, and filling the air with a mighty  
sound like the rushing of a whirlwind.  
Nearer and nearer they came, their speed  
increasing at every moment, till I was al-  
most blind with the dust they kicked up. I  
feeling certain that we could not withstand  
the shock. They kept well abreast for near-  
ly half the distance, and then one began to  
forge ahead. He steadily increased his lead  
until within a few feet of the goal he turned  
his head, and, seeing that his competitor  
was considerably in the rear, he slackened  
his pace, and, jogging up to the doctor, re-  
ceived his reward in figs and carresses."

## HE CAUGHT A BURGLAR.

A good story is told by the Providence  
Journal of a well-known citizen of Provi-  
dence, who, in view of recent burglaries  
in his neighborhood, came to his residence  
over night at his city residence. During  
the evening he lay down upon a lounge  
meditating what he would do in case his  
castle should be invaded by thieves that  
night. While thus meditating he fell  
asleep, and his slumbers were so refresh-  
ing that nearly two hours passed before  
he awoke. Opening his eyes and ears he  
fancied he saw and heard some one in the  
house. Scouring a position which enabled  
him to have an unobstructed view, he saw a  
man in another room. He came upon him  
unexpectedly and struck him a blow which  
he hardly felt himself to recover. Judge of his  
surprise when he discovered that the man  
was not a viciously drunk man, but a police-  
man who had received instructions to guard  
the house while the owner was supposed to  
be out of the city with his family. The po-  
lice man told him in explanation of his pres-  
ence that he saw a light in the house, and  
finding the door unfastened, had walked in  
and been all over the house in search of the  
supposed thief or thieves, and had just tele-  
phoned to the station for help to make the  
capture.

## OLD HISTORY ON SWEET TEMPER.

"Can not forbear pointing out to you, my  
dear child," said General Jackson once to  
a young lady in whose welfare he felt a  
deep interest, "the great advantages that  
result from a temperate conduct and sweet-  
ness of manner to all people, on all occasions.  
Never forget that you are a gentleman, and  
all your words and actions should make  
you gentle. I am quick and hasty in my  
temper, but it is a misfortune which has  
caused me inexpressible pain. It has given  
me more trouble to subdue this impetuosity  
than any thing I ever undertook."

## Woman's Rights in Missouri.

Judge Davenport, of Kansas City, has de-  
cided that women can wear trousers where-  
ever and whenever they please in Missouri.

## LIFE IN WASHINGTON.

Experience of a Man Who Came to Secure  
a Government Position.

He sat on a Lafayette square bench, says  
the Washington Critic, a wooden toothpick  
held meditatively between his teeth, the  
picture of a club-man who had dined well.  
Shuffling down one of the gravelled paths  
was a man—a tramp. He passed the club-  
man, eyeing him closely, and, halting in the  
gloom of a nearby tree, looked back to  
where the club-man sat, and then retraced  
his steps.  
"Your pardon, sir," the tramp said, in a  
husky voice, "will you give me a little ad-  
vice?"  
"Well, what is it?" the club-man asked,  
a shade of annoyance showing in his good-  
natured features, for, like most heavy  
diners, he disliked any thing that savored  
of business after dinner. Long passed, he  
thought the man but a beggar, and disliked  
his not approaching the matter directly.  
"I'll take but a minute of your time, sir,  
if you'll listen to me. I came to Washing-  
ton to secure a government position. As you  
see, I failed. For the last eight days up  
to last night I have been drunk. I have  
been a drinker all my life, and I never drank  
so much nor so steadily as I do now. I work  
up to the sun shining in my face through the  
trees of a park. My clothes were pawned and  
replaced with these rags, my watch, money,  
every thing gone for drink."

"Did you ever think of making a bet?" No;  
I can see that you haven't. Well, I have.  
Two hours ago I felt it coming on me. You  
can see," holding up a tremulous hand, "how  
unstrung my nerves are. I am almost see-  
ing the devil now as they lighted their cigars  
on my throat. And the thirst—that thirst  
nothing but alcohol will quench. You can  
not imagine what it is to feel yourself petrified,  
powerless, dead to every thing but pain,  
while the sun shines in your face, and every  
thing slings, as twisting, wriggling, squirming  
over you, gunning your eyes together, filling  
your ears with horrible sounds, while every joint in your body is  
tucked and twisted until it is ready to  
come apart. Your brain on fire, your throat  
 parched and swollen, and the hot, fetid  
breath of devils in your face as they taunt  
you with great fagons of liquor, and just  
out of your reach, God, sir, this is what  
I feel coming over me again."

"I asked you for advice. Well, I've got a  
quarter in my pocket. I can get a bed for a  
quarter, or I can get a glass of beer for a  
quarter, but I will keep me out of the reach of  
these devils to-night, until I can get to sleep.  
But where would I sleep? If I get a bed I can't  
sleep unless I have something to drink. You see  
why I asked your advice."

When the tramp began his story the club-  
man was a look of wearied indifference. But  
the tramp talked quickly and excitedly, with  
jerked, expressive gestures, his hollow  
eyes fixed on the club-man's face, and every  
moment, lending strength to what he said,  
until the club-man seemed fascinated. As the  
tramp finished he got up from the bench and  
shook himself like a man riding his mind  
of an unpleasant day's work.

"Ugh, man, you ought to be an actor.  
Here's fifty cents. No, here's a dollar, and  
for God's sake don't talk to me any more  
about your delirium tremens. Good night!"

And the tramp shuffled off into the  
deepening gloom, and, as he passed into the  
glare of the electric lights in front of the  
Treasury, the dollar and the quarter  
jingled merrily in his pocket.

## AN OSTRICH RACE.

Huge Birds Start to Cover Fourteen  
Feet with Every Stride.

A writer in the Providence Journal gives  
some interesting facts in regard to an ostrich  
farm near Los Angeles, Cal., owned by  
Dr. J. C. Satchley. He has situated his  
farm on a tract of land which he has purchased  
of the Government, and has imported thirty  
pairs of birds directly from Africa, land-  
ing them at Galveston, Tex. He also  
brought with them four Madrasse men and  
women, the people being thoroughly  
familiar with the habits of the ostrich.  
Their food is corn and alfalfa, the latter a  
kind of California grass, of which at least  
half a dozen crops are frequently cut off the  
same ground in one season. The birds weigh  
from 300 to 400 pounds each. The male bird  
is black and the female gray, and they are  
valuable chiefly for their feathers, the finest  
of which sell for \$4 apiece, according to the  
season. The ostrich is a very curious bird,  
and its habits are very peculiar. It is a  
very shy bird, and it is very difficult to  
approach it. It is very fond of water, and  
it is very fond of mud. It is very fond of  
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## The Decadence of English Wools.

A Bradford, England, woolen goods manufacturer, in writing to an English textile journal, states that the influence of colonial wools on the price of English wools is enormous. Twenty-five years ago the total import of wool was only about equal to our own clip. This year we shall probably import five times as much as we grow. Twenty-five years ago the value of the English clip was, roughly, £12,000,000. This year its value is probably £1,000,000. A comparatively small proportion of this serious loss to the farming interest is due to the falling off in quantity. It is interesting to note that while in 1858 the value of a bale of colonial wool was about £24, the total value of colonial wool imported was £11,735,000. Whereas, in 1887, with the value per bale of about £14, the total value was about £30,316,000. After allowing for the fact that a larger proportion of the wool is now imported in the grease, than was the case twenty years ago, the figures are sufficiently startling. The colonial wool imported in 1887, if taken at the prices of 1858, would show a value of £34,658,000. The price of alpaca in 1880 was \$3.41 per lb.; in 1886 it was about 15c. per lb. The value of mohair in 1886 was \$3.81 per lb.; in 1886 it was about 15c. per lb. It will be seen from this that the fall in values is not confined to English wool, so that the immense increase of imported wool and the great fall in the value of English wool do not stand precisely in the relation of cause and effect. There can be no doubt, however, that foreign and colonial wool is a great and increasing factor in determining the value of our own growth. Its influence is felt in every direction.

It has undoubtedly been considerably helped in consumption by the fashion for soft goods which has now prevailed for some ten or fifteen years. Ladies' dresses nowadays are nearly all made of soft, dull material, but it is not generally known that these goods are made entirely of colonial wool. The wearers of these fabrics, which are known by a variety of names, such as beige, fougé, cashmere, nun's veiling, Pamelita, Barabara, Haverdine, merino, etc., say they are "nice," that the softness of the goods is "just what they need," and that the goods are "just what they need." It is not generally known that these goods are made entirely of colonial wool. The wearers of these fabrics, which are known by a variety of names, such as beige, fougé, cashmere, nun's veiling, Pamelita, Barabara, Haverdine, merino, etc., say they are "nice," that the softness of the goods is "just what they need," and that the goods are "just what they need."

## Feeding Hogs.

Mr. James Chesman, of Ontario, in his little pamphlet on "Swine Husbandry," to which we have before referred in the FARMER, makes some excellent suggestions as to the proper feeding of hogs. On this point we give the following extracts: "The late Sir Erasmus Wilson defined disease as 'Malignant,' saying, 'Given a power of regulating nutrition and we can control all diseases.' If the claim of this distinguished physician be taken as correct, and it may be assumed that there are few scientists who could dispute its physiology or pathology, then it follows that nutrition is an unbroken continuity of healthy, active waste and repair, expenditure and income, and a simultaneous process from birth to slaughter. Any interruption of this harmonious progression is an arrest of growth, and when once it occurs it will be followed by several days and longer, as there is no instance on record of animals stopping for a single day through inability to grow, and continuing the next day and straight on. Any interference with the animal's habits of feeding and shelter will be likely to disturb its comfort and digestion, and must, in the interests of pig economy, be guarded against with the greatest care. With pigs, as with other animals and plants, the great battle of healthy, vigorous life must be fought out in infancy, and especially during the first twenty or thirty days. Primarily they will receive their constitutions at birth, but the feeder must take responsibility for them after. The lack of nutrition, resulting from improper food, is forcibly stated by Prof. Hensy, of Wisconsin, in the report of his feeding experiments for lean and fat. The bones of Wisconsin corn-fed hogs are as weak that in many cases their legs are broken in handling on and off the cars, thus indicating weak frames and obliqueness of constitution. Persistence of practice in right feeding for four or five generations will produce animals of entirely different type to those we now have, and give them a power of growth quite unknown to the existing race. Animals in a well-nourished state may always be known by their outward appearance; the eye, behavior, skin, temper, their appetites, and enjoyment of food. To succeed as a feeder one must know his animals individually, and be known by them. A fact of great importance to a breeder is that the length and weight of the intestines of the lean-fed hogs were greater than those fed on corn only. Prof. Sanborn's Missouri work in the same line shows that exclusive corn or starch food favors an abnormally small amount of hair and a thin skin, inducing super-sensitiveness to extremes of weather and great liability to congestion and inflammation of the internal organs. The amount of blood is below normal, and the strength of the bones and organs of locomotion reduced greatly, in some cases by one-half. Pigs rightly fed absorb into their blood the elements of lean, fat and bone in such close association, that it is not deposited in layers of lean and fat, but is evenly distributed, marbled, or streaky, as the bacon-curer would say. In all successful practice growth does not mean so much a month, but an unbroken daily gain of flesh. We must engrain on our minds this idea of continuity of nutrition if we are to rescue the pig from the slough of neglect and disease in which he is now too often found. The absence of correct views of the meaning of this word nutrition lies at the basis of failure in all our efforts to grow plants and animals. Hence it is that two men comparing results in the same kind of work, using nominally the same quantities of feeding stuffs, arrive at totally different conclusions. In roots and ensilage the growing and harvesting of the crops may give double as much

dry matter in one case as there is in the other, and a relatively greater food value pound for pound to the driest crops. Specific gravity is a good test of quality in the majority of cases. Remembering that food and nutrition lie at the foundation of all improvement in breeding, let us not imagine that a breed like the Large Whites, which has been bred longest for the special purpose of lean meat, will relieve us of the duty of rational feeding if we adopt it. What has been improved by a long course of special feeding can only be maintained and advanced by continuing the practice. The carnivorous appetite of a sow, referred to by Mr. Theodore Louis, is unnatural, and if his statement that she eats her afterbirth be taken in connection with others I have quoted from him, it indicates the unsatisfied nitrogen and bone hunger of numerous generations of pigs fed on corn or other starchy food."

Ill health modifies all possible goodness. Restore your health by using Warner's Log Cabin Sarsaparilla. It purifies the blood, regulates the liver. Try it—120 doses for \$1.00. Sold by your druggist. There is no Sarsaparilla "just as good." G. L. H.

## Veterinary Department

Conducted by Prof. Robert Jennings, Veterinary Surgeon. Professional advice through the columns of the Michigan Farmer to all regular subscribers free. The full name and address will be necessary that we may send them the necessary literature. No questions answered unless accompanied by a fee of one dollar. Private address, No. 201 First St., Detroit, Mich.

## Suspicious Symptoms in a Horse—Probably Vaginitis in a Mare.

SAND BEACH, Sept. 30, 1883. Veterinary Editor of the Michigan Farmer. I have got an old horse that has got something the matter with his water I think; but what I do not know. His sheath is badly swollen, and his left leg. It commenced last Wednesday. At first it was only left side of sheath, and there was a swelling on inside of left leg, next the body. The horse would lift his leg when I pressed swelling on leg, as if it were quite sore. The swelling has come from inside of leg, and sheath is swollen on both sides now, and left leg from above the hock joint is badly swollen and quite hard. I have noticed the horse come out of his stall one morning, and one day, I went to a man who pretends to be a horse doctor, and he gave me a bottle of stuff to be given inwardly. I have found out since, that it was composed of four ounces spirits nitre, one ounce sassafras oil, one ounce oil of turpentine, and one ounce oil of sweet almond. Would like to know if you recommend sprits of nitre to be given to a horse or not. I have examined three or four books and they condemn it. I have examined Xanth, Spomer, Maw, Manning, and one or two more, but cannot find any light as to what is the matter. If you can tell me what to do I will be much obliged. I forgot to say that his feed has been clover and a few oats, and since he has been sick I have given him three or four doses scalded flax seed and bran.

Have a young mare whose water is white colored and seems to be scant in quantity, but she feeds and looks well. Would like to know if it is wise to do anything for her. If you can help me you will oblige me very much. Would like to have an answer in next Saturday's paper if possible. G. S. H.

Answer.—The symptoms in your horse as described are not sufficiently plain to enable us to diagnose the disease satisfactorily. The soreness on pressure on the inside of hind legs indicate inflammatory action, such as is present in farcy (an incipient stage of glanders). There are two varieties or types of this disease; one is known as button farcy, confined to the lymphatic vessels of the skin, yielding readily to medical treatment. The other makes its appearance, usually upon the inside of the hind legs, excessively tender and painful when pressed upon with the fingers; the surface of the skin is uneven and lumpy; as the disease develops small abscesses form and discharge a thin serous matter; as the disease advances, the same condition will be found in the fore legs inside; the neck and lips are next attacked, and if not arrested early, to all parts of the body. If you have no veterinary surgeon near you, have your animal examined by your village doctor, and send us his report, when we will advise you what course to pursue. Give good clean hay instead of clover. Give no corn or cornmeal.

The trouble with your mare may be due to improper feeding, etc.; but, from whatever cause the treatment would not materially differ. Treatment—Give one pint raw linseed oil, and inject in the vagina once a day, after urinating, the following: Sulphate zinc, one scruple, dissolved in twelve ounces of pure water; add four ounces of glycerine. Shake well before using. Give good oats and hay to eat.

## Commercial.

## DETROIT WHOLESALE MARKET.

DETROIT, Oct. 6, 1883.

WHEAT.—The market has advanced in sympathy with wheat, and choice grades are a dollar higher than a week ago. Carload quotations are as follows:

Michigan roller process	5 50	65 75
Michigan patents	6 00	66 25
Minnesota, patents	6 00	65 63
Minnesota, roller	7 00	67 25
Minnesota, roller	7 00	67 25
Low grades	5 25	64 90

WHEAT—Active, but always shows an advance at the close of the day. Yesterday the advance was from 3½¢ to 4¢ on all grades of spot, and about as much on futures, closing firm. New York and Chicago were also higher, and most dealers now believe the highest points have not yet been reached. Cable dispatches yesterday reported strong markets abroad. Closing quotations yesterday were as follows: No. 1 white, \$1.13½; No. 2 red, \$1.17½; No. 3 red, \$1.16; No. 4 white, \$1.15; No. 5 white, \$1.14; No. 6 white, \$1.13; No. 7 white, \$1.12; No. 8 white, \$1.11; No. 9 white, \$1.10; No. 10 white, \$1.09; No. 11 white, \$1.08; No. 12 white, \$1.07; No. 13 white, \$1.06; No. 14 white, \$1.05; No. 15 white, \$1.04; No. 16 white, \$1.03; No. 17 white, \$1.02; No. 18 white, \$1.01; No. 19 white, \$1.00; No. 20 white, \$0.99; No. 21 white, \$0.98; No. 22 white, \$0.97; No. 23 white, \$0.96; No. 24 white, \$0.95; No. 25 white, \$0.94; No. 26 white, \$0.93; No. 27 white, \$0.92; No. 28 white, \$0.91; No. 29 white, \$0.90; No. 30 white, \$0.89; No. 31 white, \$0.88; No. 32 white, \$0.87; No. 33 white, \$0.86; No. 34 white, \$0.85; No. 35 white, \$0.84; No. 36 white, \$0.83; No. 37 white, \$0.82; No. 38 white, \$0.81; No. 39 white, \$0.80; No. 40 white, \$0.79; No. 41 white, \$0.78; No. 42 white, \$0.77; No. 43 white, \$0.76; No. 44 white, \$0.75; No. 45 white, \$0.74; No. 46 white, \$0.73; No. 47 white, \$0.72; No. 48 white, \$0.71; No. 49 white, \$0.70; No. 50 white, \$0.69; No. 51 white, \$0.68; No. 52 white, \$0.67; No. 53 white, \$0.66; No. 54 white, \$0.65; No. 55 white, \$0.64; No. 56 white, \$0.63; No. 57 white, \$0.62; No. 58 white, \$0.61; No. 59 white, \$0.60; No. 60 white, \$0.59; No. 61 white, \$0.58; No. 62 white, \$0.57; No. 63 white, \$0.56; No. 64 white, \$0.55; No. 65 white, \$0.54; No. 66 white, \$0.53; No. 67 white, \$0.52; No. 68 white, \$0.51; No. 69 white, \$0.50; No. 70 white, \$0.49; No. 71 white, \$0.48; No. 72 white, \$0.47; No. 73 white, \$0.46; No. 74 white, \$0.45; No. 75 white, \$0.44; No. 76 white, \$0.43; No. 77 white, \$0.42; No. 78 white, \$0.41; No. 79 white, \$0.40; No. 80 white, \$0.39; No. 81 white, \$0.38; No. 82 white, \$0.37; No. 83 white, \$0.36; No. 84 white, \$0.35; No. 85 white, \$0.34; No. 86 white, \$0.33; No. 87 white, \$0.32; No. 88 white, \$0.31; No. 89 white, \$0.30; No. 90 white, \$0.29; No. 91 white, \$0.28; No. 92 white, \$0.27; No. 93 white, \$0.26; No. 94 white, \$0.25; No. 95 white, \$0.24; No. 96 white, \$0.23; No. 97 white, \$0.22; No. 98 white, \$0.21; No. 99 white, \$0.20; No. 100 white, \$0.19; No. 101 white, \$0.18; No. 102 white, \$0.17; No. 103 white, \$0.16; No. 104 white, \$0.15; No. 105 white, \$0.14; No. 106 white, \$0.13; No. 107 white, \$0.12; No. 108 white, \$0.11; No. 109 white, \$0.10; No. 110 white, \$0.09; No. 111 white, \$0.08; No. 112 white, \$0.07; No. 113 white, \$0.06; No. 114 white, \$0.05; No. 115 white, \$0.04; No. 116 white, \$0.03; No. 117 white, \$0.02; No. 118 white, \$0.01; No. 119 white, \$0.00; No. 120 white, \$0.00; No. 121 white, \$0.00; No. 122 white, \$0.00; No. 123 white, \$0.00; No. 124 white, \$0.00; No. 125 white, \$0.00; No. 126 white, \$0.00; No. 127 white, \$0.00; No. 128 white, \$0.00; No. 129 white, \$0.00; No. 130 white, \$0.00; No. 131 white, \$0.00; No. 132 white, \$0.00; No. 133 white, \$0.00; No. 134 white, \$0.00; 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